Cascadia™

Creating Remote Possibilities®

HD-SDI DVR & Analog (960H) DVR User's Guide (Ver. 3.2)

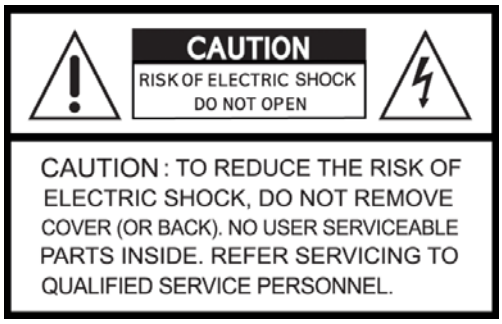
HD-SDI DVR Models: HDH4, HDH8, HDH16,
HDR4, HDR8, HDR16

Analog (960H) DVR Models: HR4, HR8, HR16

About This User's Guide

Before operating the unit, please read this user's guide thoroughly and retain it for future reference.

Precautions


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

Explanation of Graphical Symbols

This symbol indicates the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

This symbol indicates the presence of “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock, property damage, personal injury, or death.

WARNING

To reduce a risk of fire or electric shock, do not expose this product to rain or moisture.

CAUTION

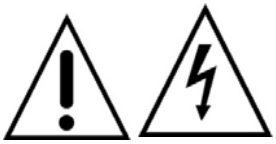
Changes or modifications not approved by the manufacture will void the warranty of the product.

Using an incompatible battery may increase the risk of fire or explosion.

Replace only with the same or equivalent type battery recommended by the manufacture.

Discard used batteries according to manufacturer’s instructions.

These precautions must be followed for safety reasons.



Warning

- Do not use if the unit emits smoke.
- Do not disassemble the unit.
- Do not place any heavy or sharp objects on the unit.
- Do not place on uneven surface.
- Do not expose to shock or vibration.
- Do not move the unit when the unit is powered on.
- Do not block or allow dust to accumulate in the air vents.
- Do not restrict airflow of the unit; doing so can damage the unit.
- Installation and servicing should be performed only by qualified and experienced personnel.
- Turn off the power of the DVR when connecting cameras, audio, or sensor cables.
- The manufacturer is not responsible for any damage caused by improper use of the product or failure to follow instructions for the product.
- The manufacturer is not responsible for any problems caused by or resulting from the user physically opening the DVR for examination or attempting to repair the unit.
- The manufacturer may not be held liable for any issues with the unit if the warranty seal is removed.

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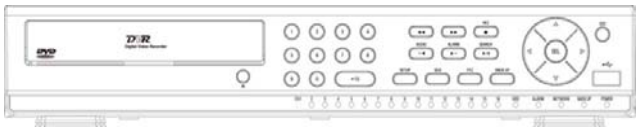
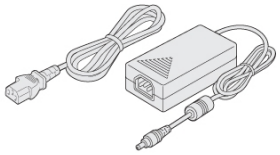
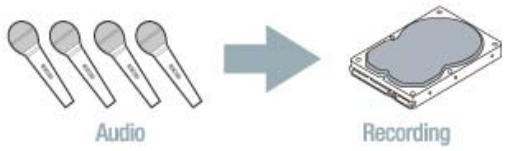
Product Components

Please make sure the following components are included as specified below.

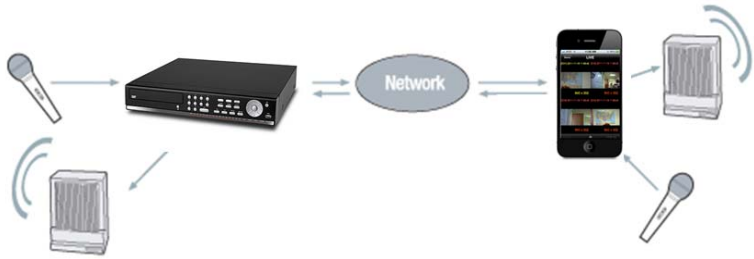
DVR	
Client Software DVD	
Remote Control	
Battery1.5V (AAA x 2EA)	
User Guide (as PDF on Client Software DVD)	
Mounting Bracket & Screws (x2 EA) [HDH8 / HDH16 / HDR8 / HDR16 models only]	
AC Power Supply (DC12V - 5A) & AC Power Cord (110V)	
Mouse	

Features

- H.264 Video compression
- Megapixel/HD-SDI Compatible (HDH4 / HDH8 / HDH16 / HDR4 / HDR8 / HDR16 Models Only)
- HDMI 1080P Video Output
- Reliable File System
- 4 Channel Audio Recording: Perfect audio synchronization for court evidence

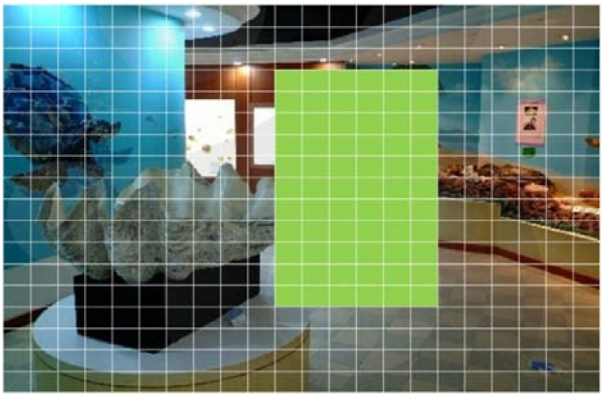


- Two-way Audio over network via Network Client Software, Web-Viewer, Multi-Client, and Mobile Viewer

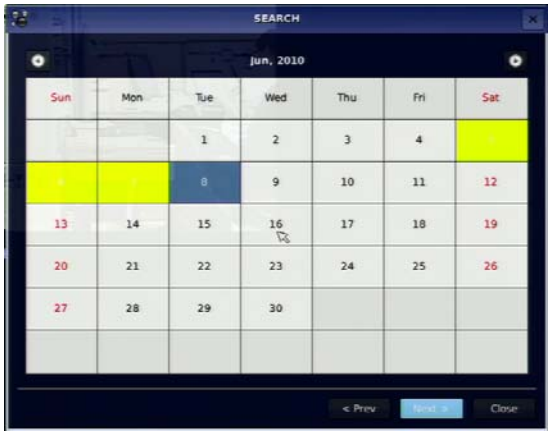


- Individual Channel Covert and Image Control

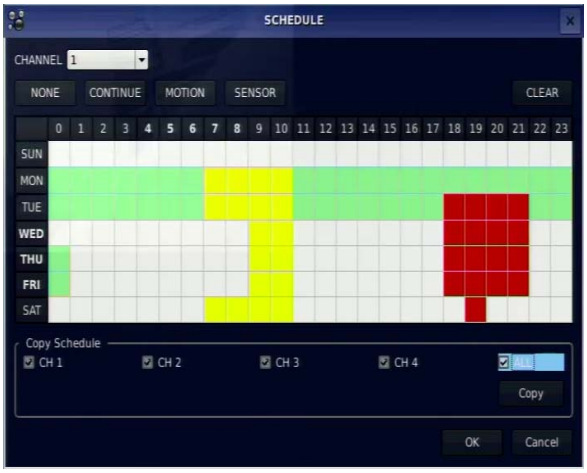
- Motion Detection



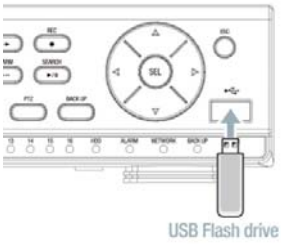
- Easy-to-use Graphical User Interface

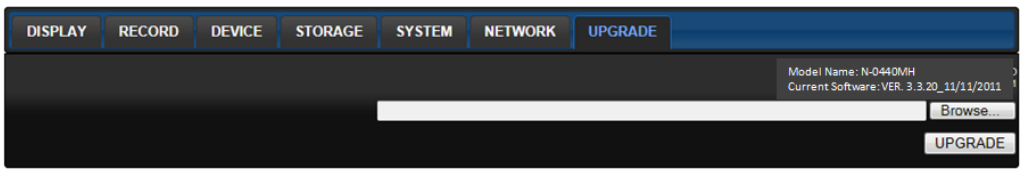


- Quick Setup for Recording Schedule

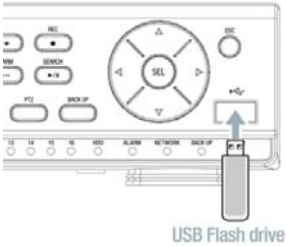


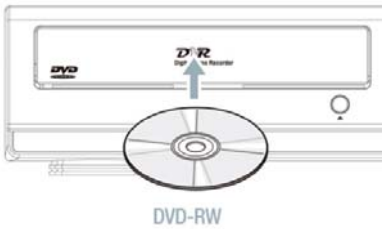
- Upgrade Software via USB Flash Drive or Network Software.



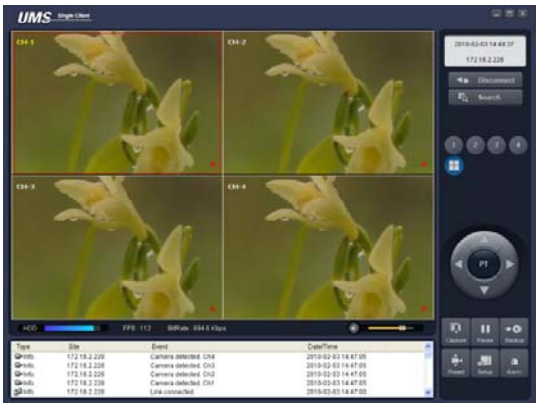


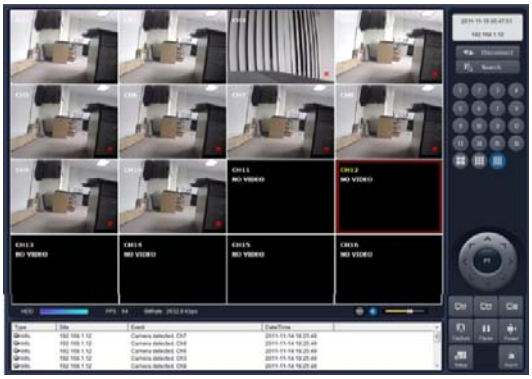
- Instant and Convenient Backup via USB Flash Drive, External Drive, Network or DVD-RW





- Exclusive File Format and AVI Backup
- Time stamp over AVI backup data for court evidence
- S.M.A.R.T. **(**Self-Monitoring, Analysis, and Reporting Technology) for HDD
- Automatic Video Input and Video-Loss Detection
- Covert Camera Operation (provides enhanced security)
- Built-in PTZ Camera Control
- Variety of ways to access network via Network Client Software, Web-Viewer, CMS, and Mobile Viewer
- View video in highest resolution on mobile phone





1. DVR - Name, Function and Connection

1.1 Front Panel

The following information will help you to operate the front panel controls.

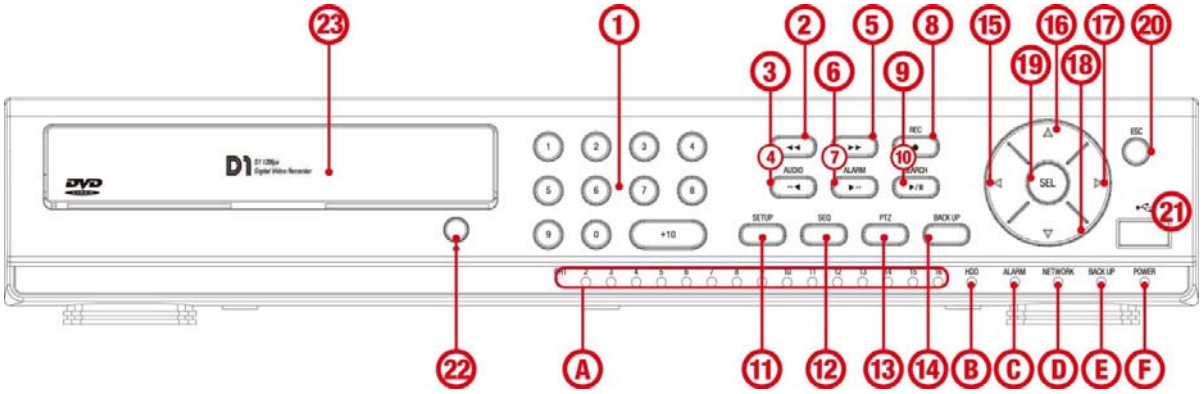


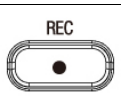
Figure 1.1.1 960(H) Front Panel

Indication Lights

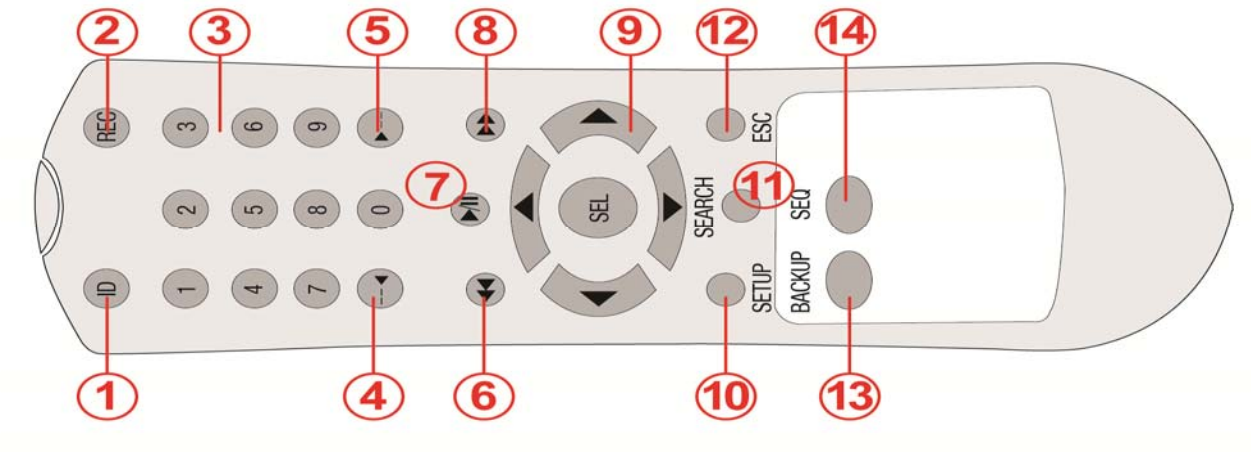
NO.	Name	Description
A	**CH1~16**	Indicates that the channel is being recorded
B	**HDD**	Indicates that the system is accessing the hard disk
C	**ALARM**	Indicates that sensor(s) is/are triggered or motion is detected
D	**NETWORK**	Indicates that a network client is connected
E	**BACKUP**	Indicates that a USB or DVD-RW device contains stored data
F	**POWER**	Indicating that the system is powered on

Front Panel Buttons

NO	Name	Description
1		Channel keys For channel 10, press the 0 key. For channel 11, press the +10 and 1 key. For channel 16, press the +10 and 6 key.
2		In playback mode, press to rewind the recording.
3		Press to select an audio mode: MUTE: Mute all 4 channels SINGLE: Highlighted channel only MIX: Mix all 4 channels

4		Jump/step backward. In playback mode, the playback position moves 60 seconds backward.
5		In playback mode, press to fast-forward the recording.
6		Press to enable/disable ALARM operation.
7		Jump/step forward. In playback mode, the playback position moves 60 seconds forward.
8		Press to start or stop manual recording.
9		In live display mode, press to open the Search menu.
10		In playback mode, press to play/pause the footage.
11		Press to open the SETUP menu.
12		Enable/disable the automatic sequence of display of channels in full-screen, quad, or 9-split display mode.
13		Press to control Pan/Tilt/Zoom operations.
14		Press to capture video in JPEG format in Live or Playback mode.
15	**(LEFT)**	Press to move left or to change the values in Setup mode. It is also used as the number 4 when entering password.
16	**(UP)**	Press to move up in the Setup menu. It is also used as the number 1 when entering password.
17	**(RIGHT)**	Press to move right or to change the values in Setup mode. It is also used as the number 2 when entering password.
18	**(DOWN)**	Press to move down in the Setup menu. It is also used as the number 3 when entering password.
19		Press to select desired menu item or to store the setup value.
20		Press for temporary storage of the changed value or to return to the previous menu screen.
21	**USB Port**	To archive still-image or video into a USB flash drive or upgrade the firmware with USB flash drive
22	**OPEN/CLOSE**	Press button to open and close the insert tray.
23	**DVD Drive**	Insert CD-R, DVD-R, or DVD+R to save video.

1.2 Remote Control



① ID: When a remote control ID number is set in the DVR, input the DVR ID number.

② REC: To start and stop manual recording

③ Number: To select channel number (e.g. 1, 2, 3, 4, etc.) or to enter DVR ID number

④ F/REW: During playback - To move the playback position backward 60 seconds

During pause - To move the playback position backward 1 frame

⑤ F/ADV: During playback - To move the playback position forward 60 seconds

During pause - To move the playback position forward 1 frame

⑥ REW: To rewind the footage at 1x, 2x, or 4x speed during playback

⑦ PLAY/PAUSE: To play or pause the footage in playback mode

⑧ FF: To fast forward the footage at 1x, 2x, or 4x speed during playback

⑨ Control buttons: Press to move the menu items or select channel

⑩ SETUP: To launch Setup menu

⑪ SEARCH: To go to the Search menu

⑫ ESC: During Setup - To return to previous menu screen

During playback - To exit from playback

System Lock – To lock a system when pressing ESC button for 5 seconds

System Unlock – To unlock a system press the ESC button for 5 seconds

⑬ BACKUP: To start backup operation in live or playback mode (Pressing “Capture” button on front panel of DVR has the same effect.)

⑭ SEQ: To start auto-sequencing of the screen in full screen mode (Toggle)

2. Setting up the DVR

The following sections detail the initial setup of the DVR.

2.1 Setup – Main Screen and Menu Tree

To enter the setup menu, right-click the screen and select setup from the submenu, or press the setup button on the front panel or the remote control.

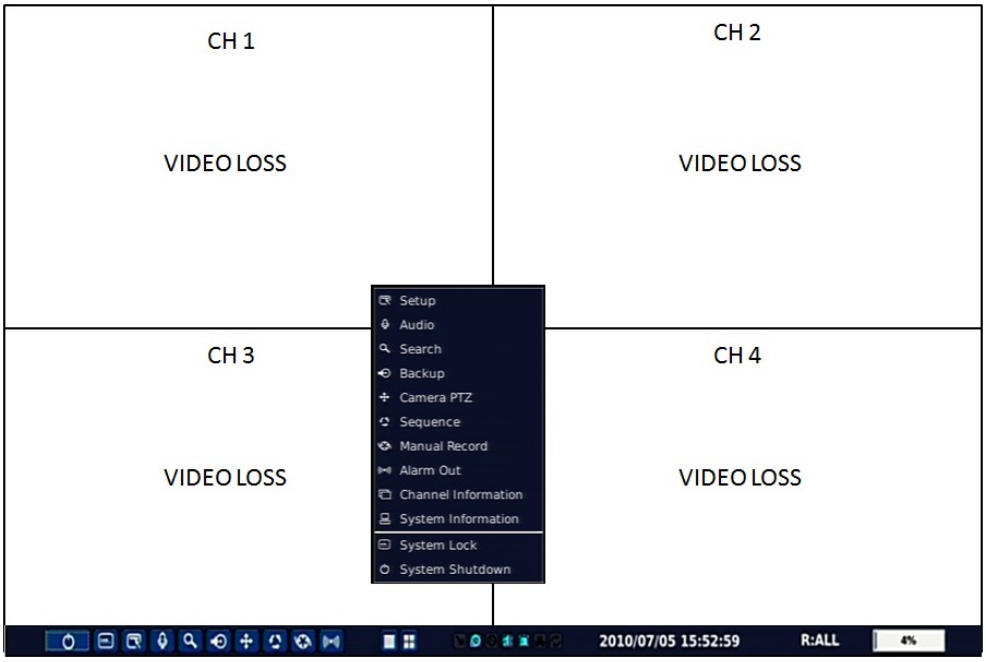
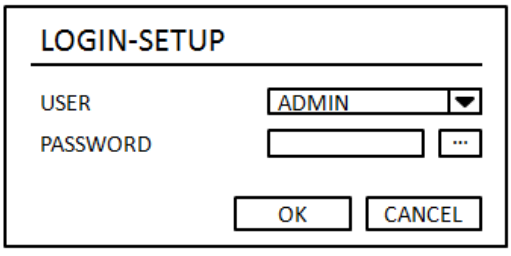


Figure 2.1.1 Setup Menu Tree



When the DVR prompts the LOG-IN window, enter password using the virtual keyboard, front panel, or remote control. The factory default password is 1111. It is highly recommended to assign a new password to protect the system. User can assign a new password in SECURITY setup menu.

- DISPLAY
  - OSD
  - OSD CONTRAST
  - SEQUENCE
  - SEQUENCE DWELL TIME
  - CHANNEL
    - NAME
    - COVERT
    - BRIGHTNESS
    - CONTRAST
    - HUE
    - SATURATION
    - VIDEO OUTPUT
- RECORD
  - CHANNEL
    - RESOLUTION
    - FRAME RATE
    - QUALITY
    - RECORDING
    - SENSOR RECORDING
    - PRE RECORD
    - POST EVENT RECORD
    - AUDIO
    - SCHEDULE

- DEVICE
  - ALARM OUT
    - SENSOR IN
    - MOTION ON
    - VIDEO LOSS ON
    - ALARM DURATION
    - ERROR ALARM
  - CONTROLLER & PTZ
    - CHANNEL
    - NAME
    - SPEED
    - ID
  - SPOT OUT
    - SPOT OUT 1
    - SPOT OUT 2
  - CHANNEL
    - MOTION ZONE
    - MOTION SENSITIVITY
  - KEY TONE
  - REMOTE CONTROLLER ID
  - SENSOR
    - TYPE
- STORAGE
  - OVERWRITE
  - DISK FORMAT
  - DISK INFO
  - RECORDING LIMIT
  - S.M.A.R.T
- SYSTEM
  - DVR-ID
  - DESCRIPTION
  - LANGUAGE
  - DATE FORMAT
  - SET DATE & TIME
    - DAYLIGHT SAVING
    - SET DATE & TIME
  - CLIENT ACCESS
  - NTP
  - SEND EMAIL

- SECURITY
  - USER AUTHENTICATION (ADMIN, NETWORK, USER1, USER2, USER3)
  - USER PASSWORD
  - PLAYBACK AUTHORITY
- NETWORK
  - PORT
  - NETWORK AUDIO PORT
  - WEB PORT
  - NETWORK TYPE (DHCP, LAN)
  - DDNS
  - NETWORK STREAM
- CONFIG
  - SAVE SETUP TO A USB
  - LOAD SETUP FROM A USB
  - LOAD DEFAULT
  - LOAD FACTORY DEFAULT
  - SOFTWARE UPGRADE
- QUICK SETUP
  - USE QUICK SETUP
    - INPUT DESIRED DAYS
  - CUSTOMER SETTINGS
    - RESOLUTION
    - FRAME RATE
    - QUALITY
    - RECORDING
    - DAYS TO RECORD

2.2 Setup – Display Mode

In the SETUP menu, select the DISPLAY tab. The DISPLAY menu is displayed as pictured below. Navigate through the menu items using the mouse or the control buttons (◄ ▲► ▼on the remote control and change the value of the menu item.

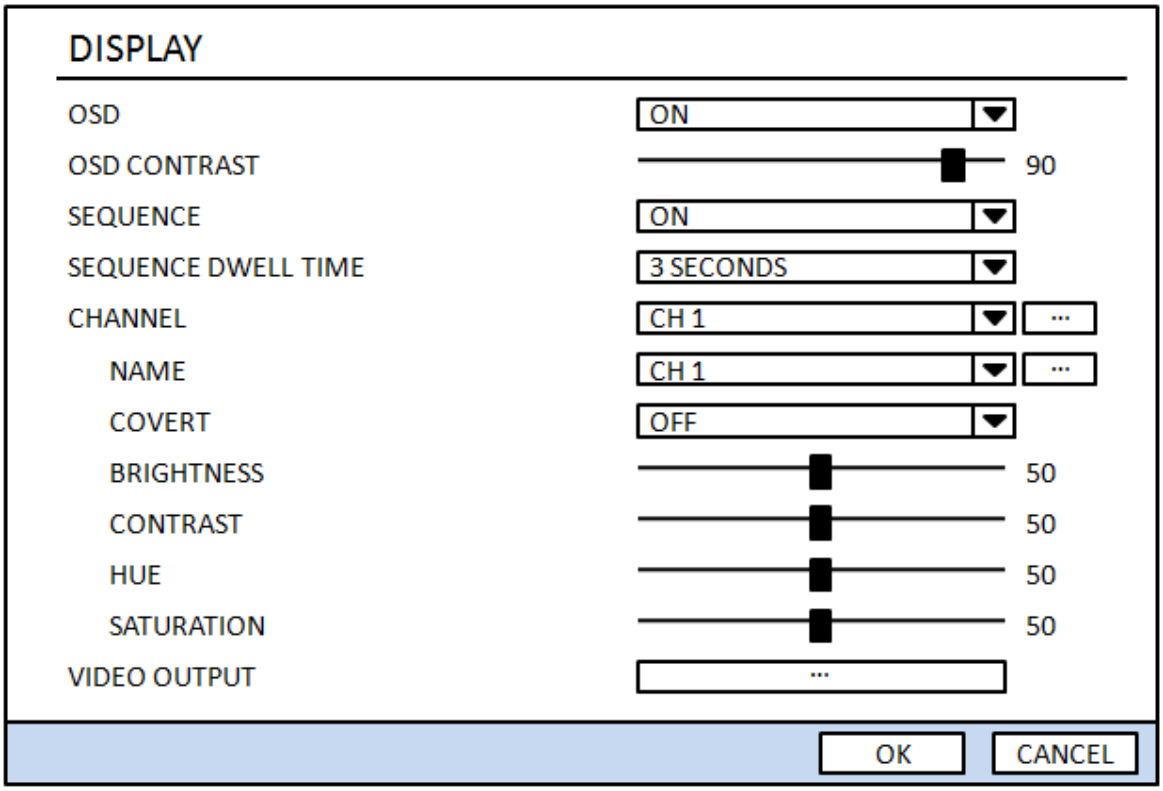


Figure 2.2.1 Display Mode Setup Screen

Table 2.2.1 Menu Items in DISPLAY Mode Setup

Item	Description
OSD	Enable/disable on-screen-display.
OSD CONTRAST	Set the visibility level of the On Screen Display (OSD) [0~100]
SEQUENCE	Enable/disable sequential display of video in full screen mode.
SEQ-DWELL TIME	Set the time interval for channels in sequential display mode (3~60 seconds)
CHANNEL	Use the mouse or control buttons on the remote control to select a channel for applying the following settings: Press the right square button to change the setting value of all channels at once. Press SEL button to change the setting value of all channels at once. Left click on the mouse to highlight the setting and double-click if you want to change the value. Once the value has been changed, select OK to confirm the changes. (COVERT, BRIGHTNESS, CONTRAST, HUE, and SATURATION)

	COVERT	BRIGHTNESS	CONTRAST	HUE	SATURATION
ALL	OFF	40	40	40	40
1	OFF	40	40	40	40
2	OFF	40	40	40	40
3	OFF	40	40	40	40
4	OFF	40	40	40	40
5	OFF	40	40	40	40
6	OFF	40	40	40	40
7	OFF	40	40	40	40
8	OFF	40	40	40	40
9	OFF	40	40	40	40
10	OFF	40	40	40	40
11	OFF	40	40	40	40
12	OFF	40	40	40	40
13	OFF	40	40	40	40
14	OFF	40	40	40	40
15	OFF	40	40	40	40
16	OFF	40	40	40	40
				OK	CANCEL

NAME	Set the channel name. Press the right square button, set the channel name, and select OK using the mouse or the control buttons (◀ ▲ ▶ ▼) on the remote control. The name has a maximum limit of 10 characters.

COVERT	Enable/disable display of the specified video channel in live display mode.
BRIGHTNESS	Change the brightness value of the specified channel. (0~100)
CONTRAST	Change the contrast value of the specified channel. (0~100)
HUE	Change the hue value of the specified channel. (0~100)
SATURATION	Change the saturation value of the specified channel. (0~100)
VIDEO OUTPUT (HDMI/VGA)	Set monitor output resolution; default is 1024x768. NOTICE: Default and lowest resolution for HDR4, HDR8, and HDR16 is 1280x720.

2.3 Setup – Record Mode

In the SETUP menu, select the RECORD tab. The RECORD menu is displayed as pictured below. Navigate through the menu items using the mouse or the control buttons on the remote control and change the values of each menu item.

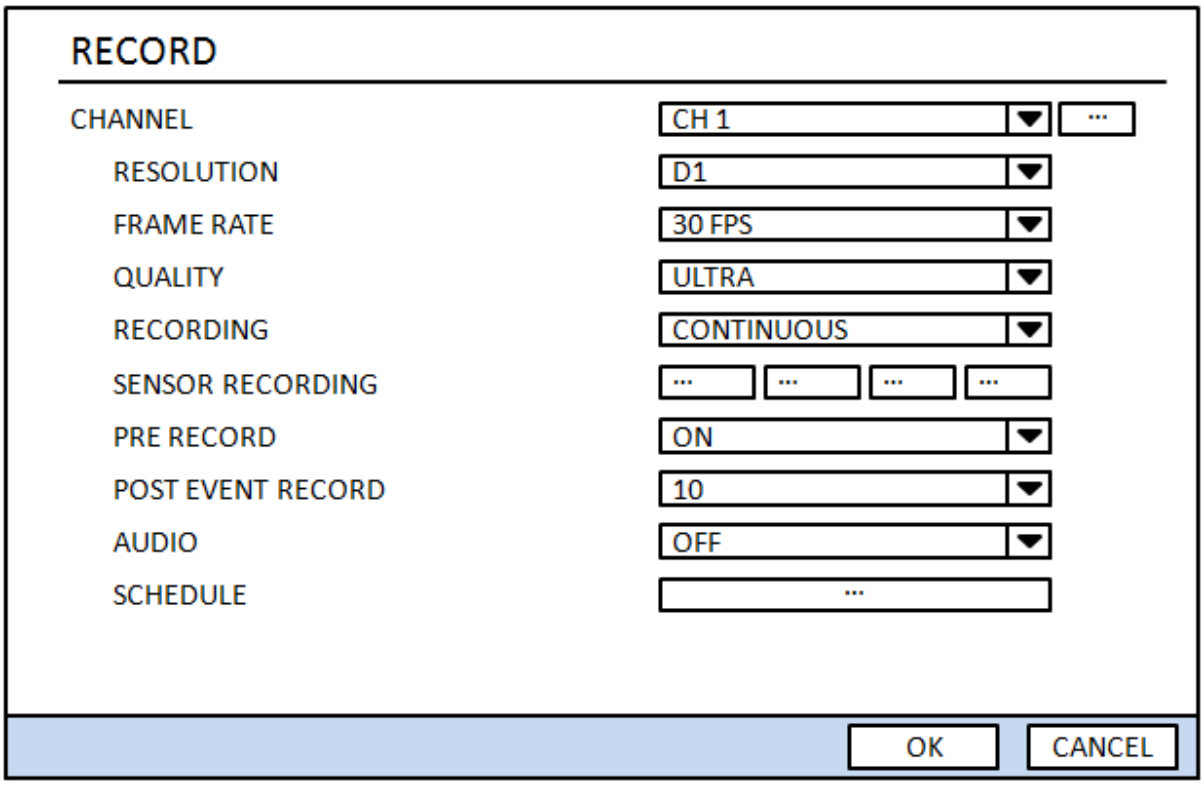


Figure 2.3.1 Recording Mode Setup Screen

Table 2.3.1 Menu Items in Recording Mode Setup

Menu Item	Description
CHANNEL	Use the mouse or control buttons on the remote control to select a channel for applying the following settings: Press the right square button to change the setting value of all channels at once. After the value has been changed, select OK to confirm the changes. (RESOLUTION, FRAME RATE, QUALITY, RECORDING, PRE RECORD, and POST EVENT RECORD)
RESOLUTION	• **960(H) DVR (HR4, HR8, HR16):** Select CIF, Half D1, or D1 using the mouse or the control buttons on the remote control. • **Megapixel DVR (HDH4, HDH8, HDH16, HDR4, HDR8, HDR16):** Select 1280 x 720 or 1920 x 1080 using the mouse or the control buttons on the remote control.

FRAME RATE	Set the frame rate for the specified channel. The sum of the frame rate values from each channel cannot exceed the maximum frame rates for a specific recording resolution. **Typical values of the maximum frame rate for video are as follows:**

960(H) DVR	CIF	Half D1	D1
HR4	120 IPS	120 IPS	120 IPS
HR8	240 IPS	240 IPS	120 IPS
HR16	480 IPS	240 IPS	120 IPS

HD-SDI DVR	1280 x 720	1920 x 1080
HDH4	60 IPS	60 IPS
HDH8	120 IPS	120 IPS
HDH16	240 IPS	240 IPS
HDR4	120 IPS	120 IPS
HDR8	240 IPS	240 IPS
HDR16	480 IPS	480 IPS

QUALITY	Select the recording quality for the specified channel: LEVEL 1 ~ LEVEL 5.
RECORDING	Assign the recording mode for each channel: Continuous, By Motion, By Sensor, By Schedule, or Disable.
PRE RECORD	Enable/disable pre-event recording (Pre-event recording time is 5 seconds to 20 minutes.)
POST EVENT RECORD	Set the post-event recording time duration for the specified channel: 10~60 seconds.
SENSOR RECORDING	Enable setting up to 4 sensors for the specified channel.
AUDIO	Enable/disable audio recording for the specified channel.
SCHEDULE	Set the recording schedule. Click the "…" button next to SCHEDULE or press SEL to enter the schedule setup screen.

2.3.1 Recording Schedules

To setup a recording schedule, select SCHEDULE in the RECORD menu. Navigate through the menu items using the mouse or the control buttons on the remote control.

1. [**Channel**]: Select the specific channel.
2. [**Recording Type**]: Select the Recording Type. It is possible to set up recording modes of various types using Continuous (green), Motion (yellow), and Sensor (red).
3. [**Setup**]: Left-click and drag the mouse to change the schedule for more than one timeslot. Click the respective boxes for times and days to select the entire time and day respectively (for example, clicking on Sunday will select times 0 through 23 horizontally from SUN).
4. [**Copy Schedule]**: To copy the schedule setup from one channel to another, first select the channel containing the desired schedule, and second select the channel to receive the copied schedule. Select OK to confirm the changes.

Figure 2.3.2 Schedule Recording Setup Screen

2.4 Setup – Device Mode

In the SETUP menu, select the DEVICE tab. The Device menu is displayed as pictured below. Navigate through the menu items using the mouse or the control buttons on the remote control and change the values of the menu items.

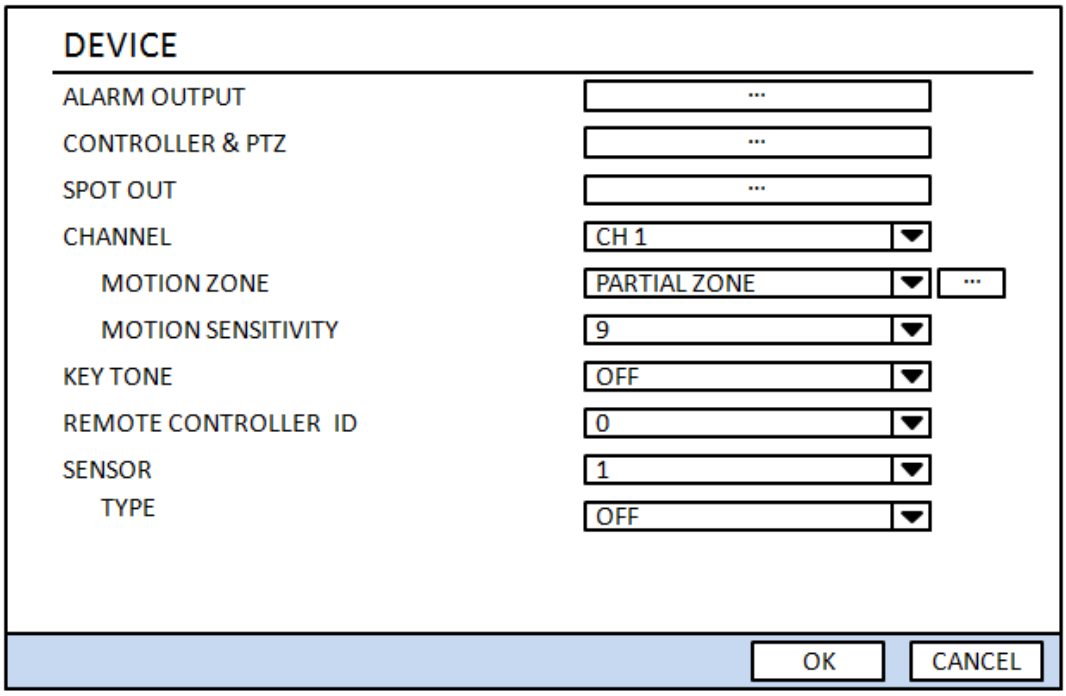


Figure 2.4.1 Device Setup Screen

Table 2.4.1 Menu Items in Device Setup Screen

Item	Description
ALARM OUT	Set the sensor, motion, and video-loss for each alarm.
CONTROLLER & PTZ	Set the PTZ baud rate, protocol, and ID.
SPOT-OUT	Set the details for spot monitoring. It supports 2 spot-outs.
CHANNEL	Select specified channel for motion zone setup.
MOTION ZONE	Select either Full Zone or Partial Zone for motion sensitivity.
MOTION SENSITIVITY	Set the level of motion sensitivity for the specified channel (1~9).
KEY TONE	Enable/disable key tone.
REMOTE CONTROL ID	Select a remote control ID. 1. Select ID number. 2. Press the same number as ID set in DVR on the remote control. 3. An icon will be displayed on the Live Screen that corresponds to the remote control ID number. The options are from 0 to 99.
SENSOR	Select sensor number from 1 to 4.
TYPE	Set the type of sensor for the specified channel. Options are: OFF, N/O (normal open), and N/C (normal closed).

2.4.1 ALARM-OUT

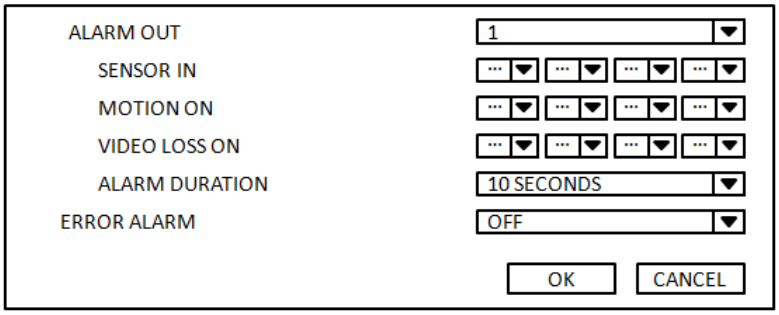


Figure 2.4.2 ALARM-OUT Setup Screen

Table 2.4.2 Menu Item in ALARM-OUT Setup Screen

Item	Description
ALARM OUT	Select an Alarm-out number.
SENSOR IN	Enable Alarm Out by Sensor up to 4 Inputs.
MOTION ON	Enable Alarm Out by Camera Motion up to 4 cameras.
VIDEO LOSS ON	Enable Alarm Out by Video Loss up to 4 cameras.
ALARM DURATION	Set the alarm dwell time from 5 to 60 seconds.
ERROR ALARM	Set the error type for the alarm activation. The options are OFF, ALL, HDD ERROR, and VIDEO LOSS.

2.4.2 SPOT-OUT Setup

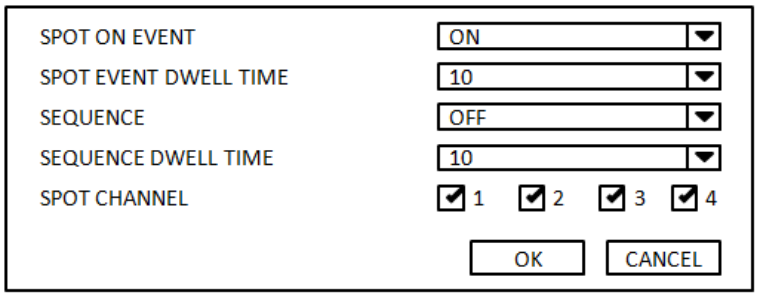


Figure 2.4.3 SPOT-OUT Setup Screen

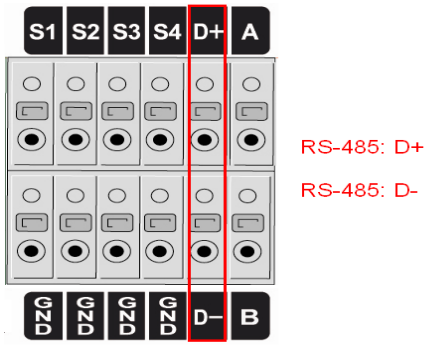
Table 2.4.3 Menu item in SPOT-OUT Setup Screen

Item	Description
SPOT ON EVENT	Enable/Disable display of the channel when an event is active.
SPOT EVENT DWELL TIME	Set the dwell time for the display of the event-activated channel. (1-10 sec)
SEQUENCE	Enable/disable sequential display of spot channel in full screen. If select ON, spot channel selection screen is displayed.
SEQ-DWEL TIME	Set the dwell time for the spot channel display. (1-10 sec)
SPOT CHANNEL	Select a channel for spot monitoring using the mouse or the control buttons on the remote control and press OK button.

2.4.3 CONTROLLER & PTZ Setup

To control the PTZ functions of the camera, connect a controller to the RS-485 port.

① Connect the RS-485 cables of the PTZ camera to the RS-485 port on the rear panel.



② Press the PTZ menu button. The PTZ menu screen is displayed as below.

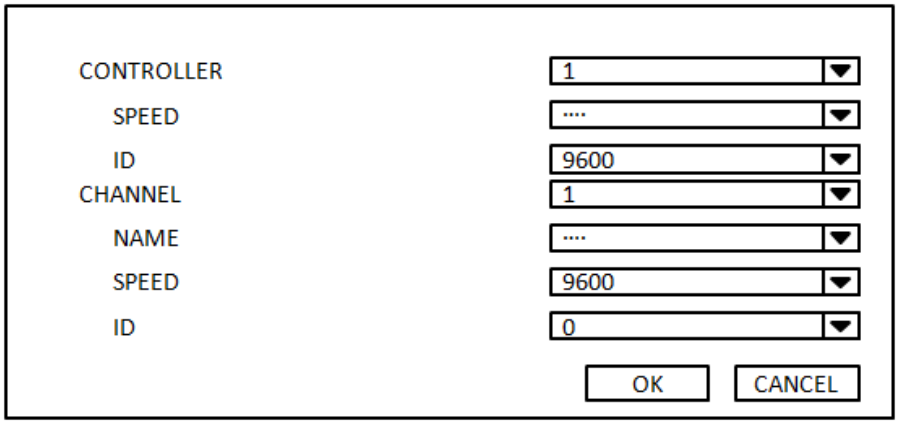


Figure 2.4.4 PTZ Control Setup Screen

Note: For speed dome cameras that support RS-485, connect them directly to the RS-485 port. If the camera is controlled with RS-232C, use a RS-485 to RS-232C signal converter.

On the PTZ control setup screen, you can select or set the protocol type of the camera that is the same as the one installed on the site. If the camera has a specific camera ID, select the camera ID using the mouse or the control buttons of the remote control.

The following options are available on the PTZ setup screen:

CHANNEL (Corresponds to the PTZ camera's ID)

NAME (Protocol type)

SPEED (Baud Rate) (19200, 14400, 9600, 4800, or 2400)

ID (0~63)

2.4.4 Motion Zone Setup

Select MOTION ZONE using the mouse or the control buttons on the remote control and select either PARTIAL ZONE or FULL ZONE using the mouse control. The default value is FULL ZONE.

If FULL ZONE is selected, the motion zone grid screen is not displayed. Only set the level of sensitivity for MOTION SENSITIVITY.

FULL ZONE: The motion sensor is active on the whole screen.

PARTIAL ZONE: The motion sensor is active in the set detection frame.

Select the motion detection position using the mouse or the control buttons on the remote control. Left-click and drag the mouse pointer to select or deselect the area. The highlighted area indicates the partial motion detection zone. Press the ESC button or right-click to return to the previous menu.

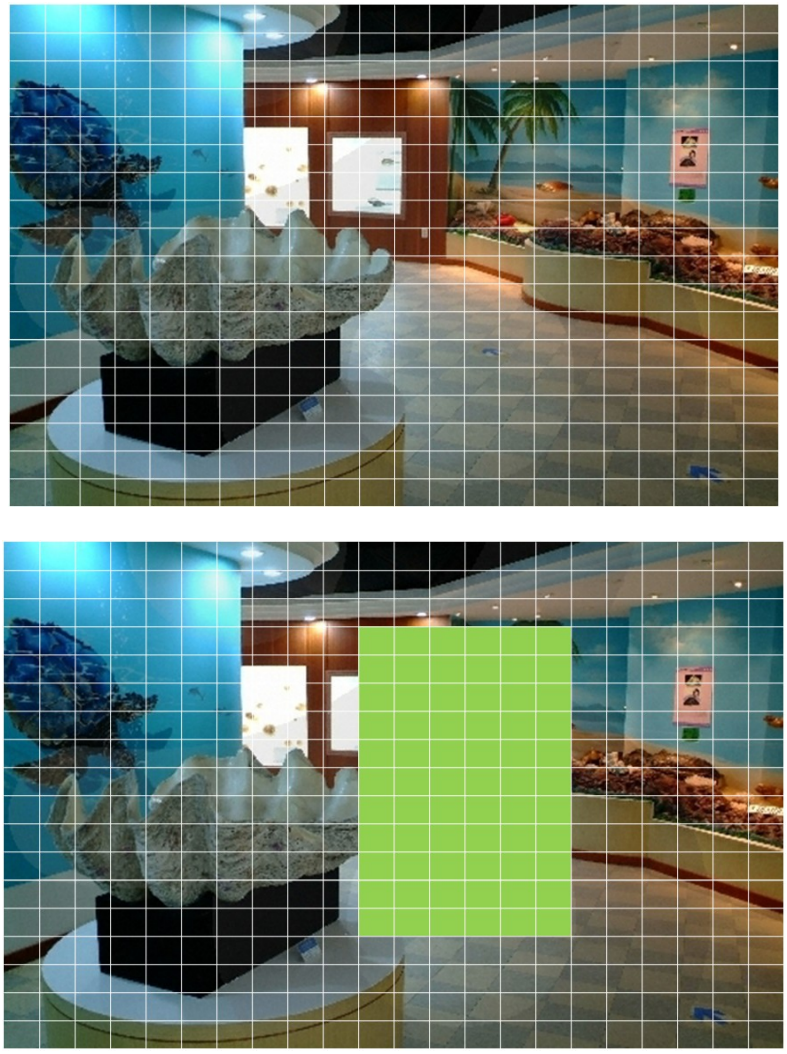


Figure 2.4.5 Motion Zone Grid Screen

2.5 Setup – Storage Mode

In the SETUP menu, select the STORAGE tab. The Storage menu is displayed as pictured below. Navigate through the menu items using the mouse or the control buttons on the remote control and change the values of the menu items.

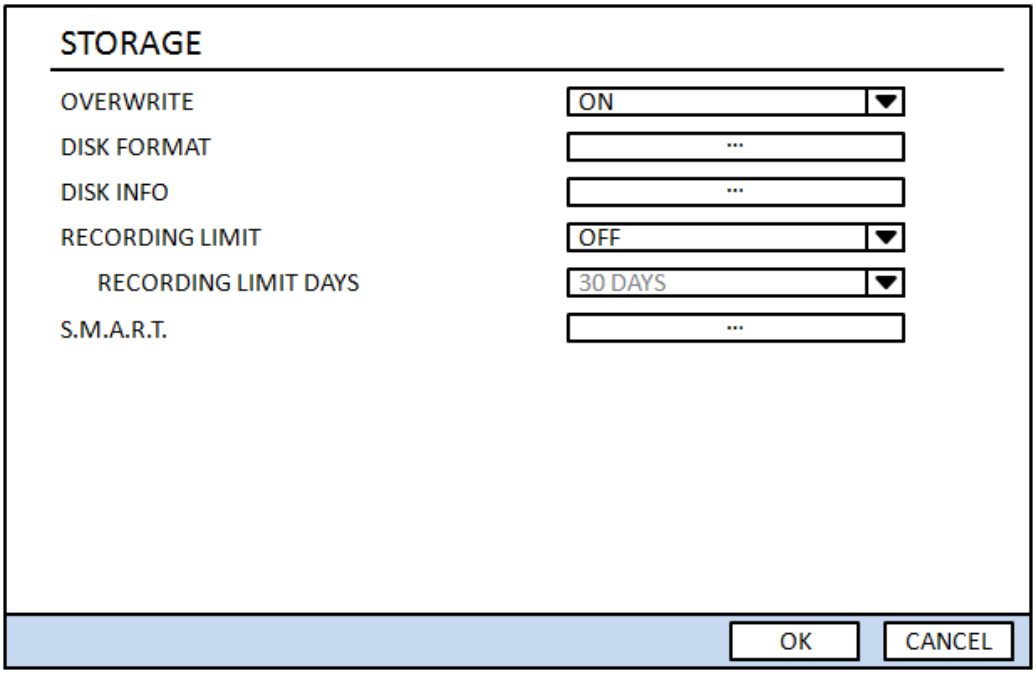


Figure 2.5.1 STORAGE Setup Screen

Table 2.5.1 Menu Items in STORAGE Setup Screen

Item	Description
OVERWRITE	When enabled, the DVR will continue recording and overwrite the oldest existing recorded data when the hard drive is full. When disabled, recording will stop when the hard drive is full.
DISK FORMAT	You will have an option YES or NO to format the hard drive. **Caution: It is recommended to archive any data you may need before you format the hard drive, which will delete everything on the drive.**
DISK INFO	Hard drive information
RECORDING LIMIT	Enable/disable recording limit.
RECORDING LIMIT DAYS	Set the recording limit in days. (1- 90 days) When setting to 1 day, the data will be removed by the hour.
S.M.A.R.T	Set the HDD temperature limit and alarm and beep settings based on that limit. TEMPERTURE 60 °C (140 °F) ALARM OFF BUZZER OFF OK CANCEL

2.6 Setup – System Mode

In the SETUP menu, select the SYSTEM tab. The System menu is displayed as pictured below. Navigate through the menu items using the mouse or the control buttons on the remote control and change the values of the menu items.

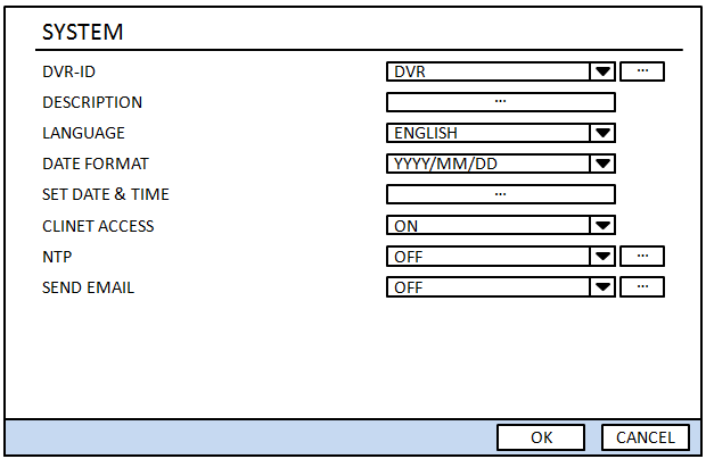
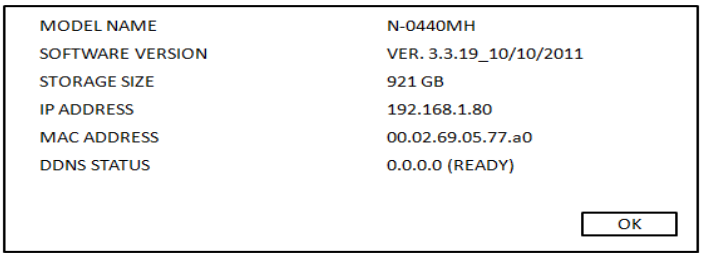
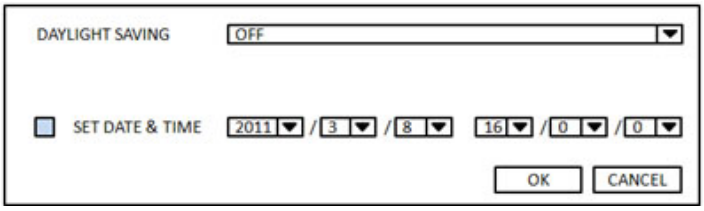
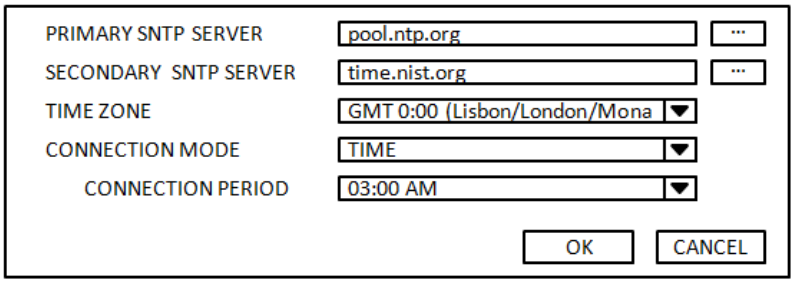


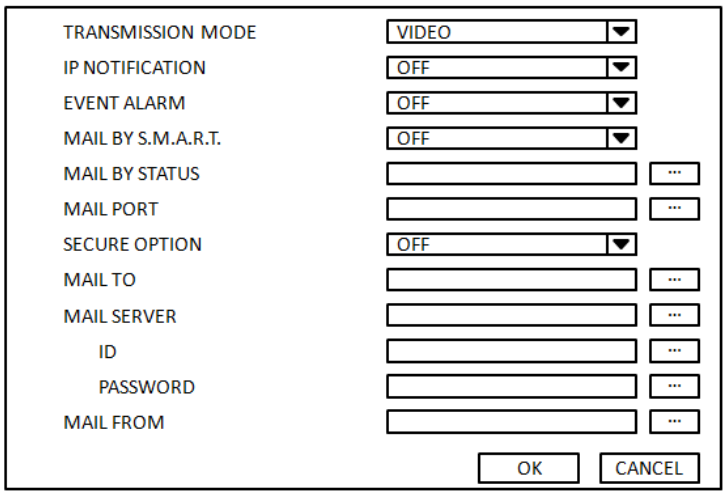
Figure 2.6.1 SYSTEM Setup Screen

Table 2.6.1 Menu Items in SYSTEM Setup Screen

Item	Description
DVR ID	Set DVR ID using the mouse or the control buttons on the remote control. Click OK to apply the DVR ID.
DESCRIPTION	Press/Click the button to view the system information, which contains the following: Hardware version, Software version, Storage size, IP address, MAC address, and DDNS/Port Forward status.  MODEL NAME N-0440MH SOFTWARE VERSION VER. 3.3.19_10/10/2011 STORAGE SIZE 921 GB IP ADDRESS 192.168.1.80 MAC ADDRESS 00.02.69.05.77.a0 DDNS STATUS 0.0.0.0 (READY) OK
LANGUAGE	Select the display language using the mouse or the control buttons on the remote control. Once a language is selected, the display language changes.
DATE FORMAT	Select the date display format using the mouse or the control buttons on the remote control. Options are: (YYYY/MM/DD, MM/DD/YYYY, DD/MM/YYYY, YYYY-MM-DD, MM-DD-YYYY, DD-MM-YYYY)
SET DATE&TIME	Select the display date and time using the mouse or the control buttons on the remote control and press OK button to set the present date and time. 
DAY LIGHT SAVING	Select DAYLIGHT SAVING using the mouse and the control buttons on the remote control and choose the appropriate daylight savings time zone. If choosing EU or OTHERS, set the applicable conditions.

	The options are: **OFF**: Daylight savings is turned off. **USA**: Applies the USA daylight savings time. **EU**: Applies the EU daylight saving time. - Select the GMT AREA using the control buttons. - Set the time difference with the standard time using the control buttons. **OTHERS**: If the time zone is neither USA nor EU, set the start and end date of the daylight saving period. - Select BEGIN or END using the control buttons and press the SEL button. - Using the control buttons, select the item and the setting value, and then press the ESC button to return to Set Date & Time setup menu. **CAUTION:** **- Do not set the start time to 23:00 for Day Light Savings Time.** **- Daylight Savings Time cannot be applied if the BEGIN and END dates are the same**.
CLIENT ACCESS	Enable/Disable remote access for network client software.
NTP	NTP is an abbreviation for Network Time Protocol, which synchronizes the time of the computer systems over variable-latency data networks.  **PRIMARY SNTP SERVER**: Input the address of the primary NTP time server. **SECONDARY SNTP SERVER**: Input the address of the secondary NTP time server. **TIME ZONE**: NTP synchronizes with GMT (Greenwich Mean Time) regardless of geography; therefore, users must set their own time difference. **CONNECTON MODE**: Select NTP server connection mode to one of the following: **INTERVAL**: Synchronize the clock based upon desired hours **TIME**: Synchronize the clock at desired time on a daily basis **CONNECTION PERIOD**: 1~24

SEND EMAIL



TRANSMISSION MODE: Set e-mail attachment format to either an image or a video clip of the channel that sounded an alarm when an alarm event is triggered.

IP NOTIFICATION: Enable/disable sending e-mail report when the IP address of your DVR is changed.

EVENT ALARM: Enable/disable sending e-mail reports on the channel that sounded the alarm when an alarm event is triggered.

S.M.A.R.T: Enable/disable S.M.A.R.T. Notifications

MAIL PORT: Set the E-Mail Port

SECURE OPTION: Set E-mail secure option to NONE, SSL, or TLS.

MAIL TO: Enter the appropriate email address to enable sending e-mail reports using a virtual keyboard.

MAIL SERVER: Enter the appropriate mail server information to enable sending daily e-mail reports using a virtual keyboard.

ID: To set the connection user ID for the mail server using a virtual keyboard. (e.g. abcd@abcdefg.com)

PASSWORD: To set the connection password for the mail server using a virtual keyboard.

MAIL FROM: To set the mail address sent to the destination host using a virtual keyboard.

2.7 Setup – Security Mode

In the SETUP menu, select the SECURITY tab. The SECURITY menu is displayed as pictured below. Navigate through the menu items using the mouse or the control buttons on the remote control and change the values of the menu items.

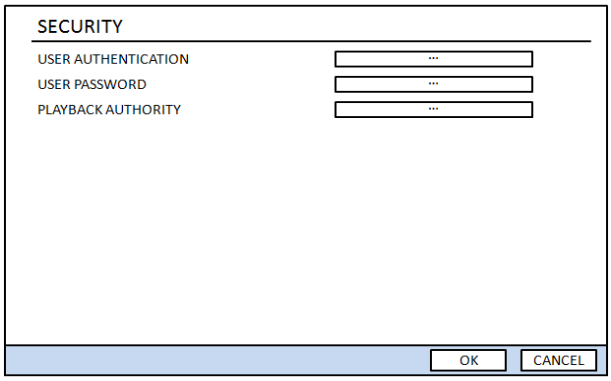
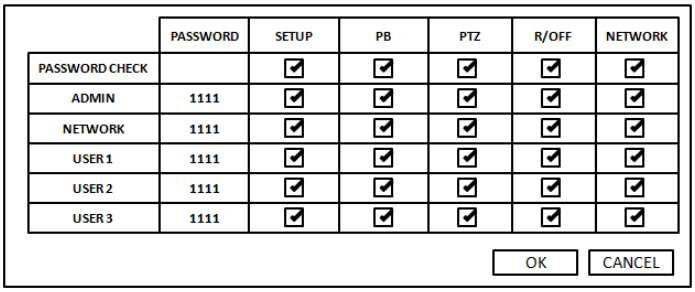


Figure 2.7.1 SECURITY Setup Screen

Table 2.7.1 Menu Items in PASSWORD Setup Screen

Item	Description
USER AUTHENTICATION	*Note: Admin is the only user with access to this menu. **PASSWORD CHECK:** **Setup, PB (Playback), PTZ, R/OFF (Record/Off), and Network** Selected Checkbox: The DVR will ask all users for a password when the given function is selected. Blank Checkbox: The DVR will not ask any users for a password when the given function is selected. 
	ADMIN, NETWORK, USER1, USER2, USER3: Selected Checkbox: The user can access the function. Blank Checkbox: The user cannot access the function.
USER PASSWORD	Options are ADMIN, NETWORK, USER1, USER2 and USER3. Select USER PASSWORD using the mouse or the control buttons on the remote control and press SEL button. Select user type and enter the current password. Next, enter a new password; enter the same password again to confirm and select OK. The message "PASSWORD CHANGED" will be displayed. The factory default password is **1111**.
PLAYBACK AUTHORITY	Grants "authority of playback" to specific users on a per channel basis.

2.8 Setup – Network Mode

In the SETUP menu, select the NETWORK tab. The Network menu is displayed as pictured below. Navigate through the menu items using the mouse or the control buttons on the remote control and change the values of the menu items.

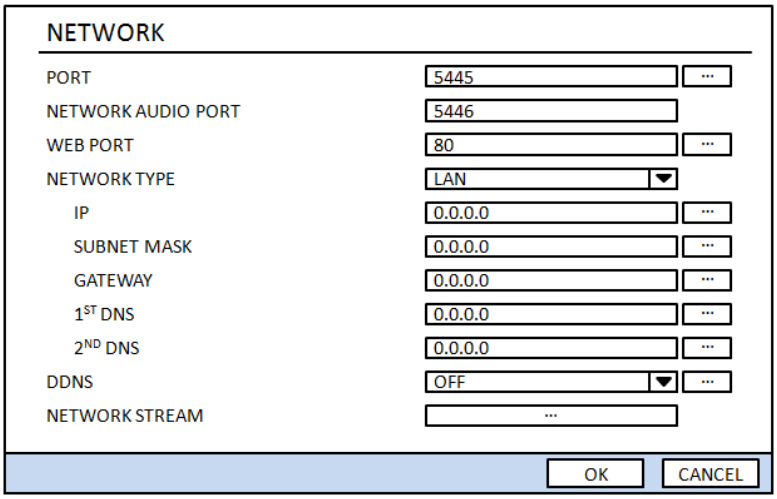


Figure 2.8.1 NETWORK Setup Screen

Table 2.8.1 Menu Items in Network Setup Screen

Item	Description
NETWORK PORT	Set a port number for connecting to the network. By default, 960(H) DVRs will be set to 2100; HD-SDI to 2200. The factory default network port is 5445.
NETWORK AUDIO PORT	Port for audio streaming (the value will be that of the Network Port +1)
WEB PORT	Web Sever Port number (Default: 80)
NETWORK TYPE	Select a type of network connection. Options are STATIC or DHCP. **DHCP:** DVR will automatically retrieve an IP address from the network. **LAN:** Network information (IP, Gateway, Subnet Mask, 1st and 2nd DDNS) must be manually configured.
DDNS	Enable/disable using domain name address through DDNS server. If set to ON, DDNS server name will appear for domain registration. DDNS 1: Select ddnscennter.com. (If a different DDNS server is selected, the DVR may not connect properly.) **DDNS 2**: Select if user desires to use other general-purpose DDNS server. **DDNS INTERVAL**: Set the connection interval (5~60 minutes)
NETWORK STREAM	Set the value for network streaming.

2.8.1 DDNS

User can use this function to connect to a network with a domain name. The DVR supports several different DDNS services. The DDNS interval can be set from 5 to 60 minutes. To connect to a network with a domain name, the user must register a MAC address and serial number of the DVR and create a unique domain name on http://www.ddnscenter.com.

Select ddnscenter.com from the three DDNS servers. (If you select other DDNS server, the DVR will not connect to the DDNS properly.)

Please refer to "APPENDIX: How to Connect the Network" (pg. 105) for registration details.

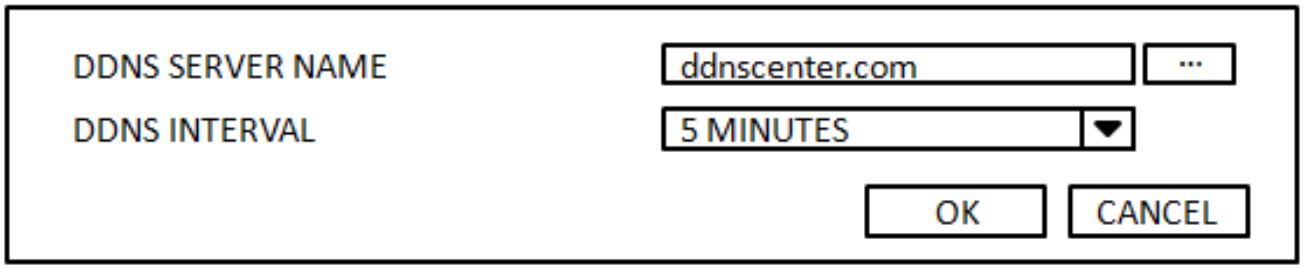


Figure 2.8.2 Network setup screen – DDNS Server 1

If the user wants to use another general-purpose DDNS Server, select Server 2. The user then has to input the server name, ID, and password using a virtual keyboard.

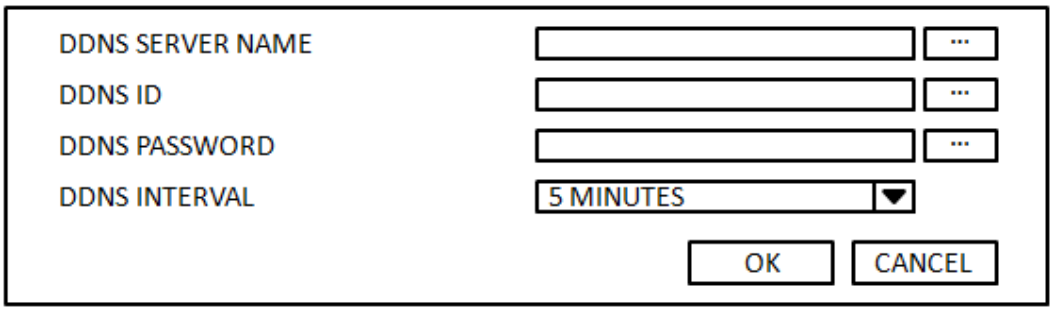


Figure 2.8.3 Network Setup Screen – DDNS Server 2

2.8.2 Network Ports

When you connect one or more DVRs to a network through an IP sharing device, each device must have a unique TCP port number for access to each unit from outside the LAN. The IP sharing device must be configured to forward the assigned port to the specific DVR.

Note: This port number is listed next to the Port menu option in the Network Setup screen. If you plan to access the DVR units only from within the same LAN, the TCP port does not have to be changed.

Network Access through a Router

In order to access the DVR remotely through a router (firewall), the user must open TCP port for command level, live channels, and storage channels. The user needs to port forward 3 ports in the router. These ports are found on the Network Tab of the DVR: 1) Network, 2) Network Audio, and 3) WEB.

2.8.3 Network Stream

User can set the frame rate and the resolution of a network stream for a specific channel. Total frame rate is CIF 240fps/100fps (NTSC/PAL).

Note: The network streaming maximum is the recording frame rate of the channel.

	RESOLUTION	FRAME	QUALITY
ALL	CIF	10	LEVEL 5 (H)
1	CIF	10	LEVEL 5 (H)
2	CIF	10	LEVEL 5 (H)
3	CIF	10	LEVEL 5 (H)
4	CIF	10	LEVEL 5 (H)
5	CIF	10	LEVEL 5 (H)
6	CIF	10	LEVEL 5 (H)
7	CIF	10	LEVEL 5 (H)
8	CIF	10	LEVEL 5 (H)
9	CIF	10	LEVEL 5 (H)
10	CIF	10	LEVEL 5 (H)
11	CIF	10	LEVEL 5 (H)
12	CIF	10	LEVEL 5 (H)
13	CIF	10	LEVEL 5 (H)
14	CIF	10	LEVEL 5 (H)
15	CIF	10	LEVEL 5 (H)
16	CIF	10	LEVEL 5 (H)

OK CANCEL

Figure 2.8.4 Network Setup Screen – Network Stream

2.9 Setup - CONFIG Mode

In the SETUP menu, select the CONFIG tab. The configuration menu is displayed as pictured below. Navigate through the menu items using the mouse or the control buttons on the remote control and change the values of the menu items.

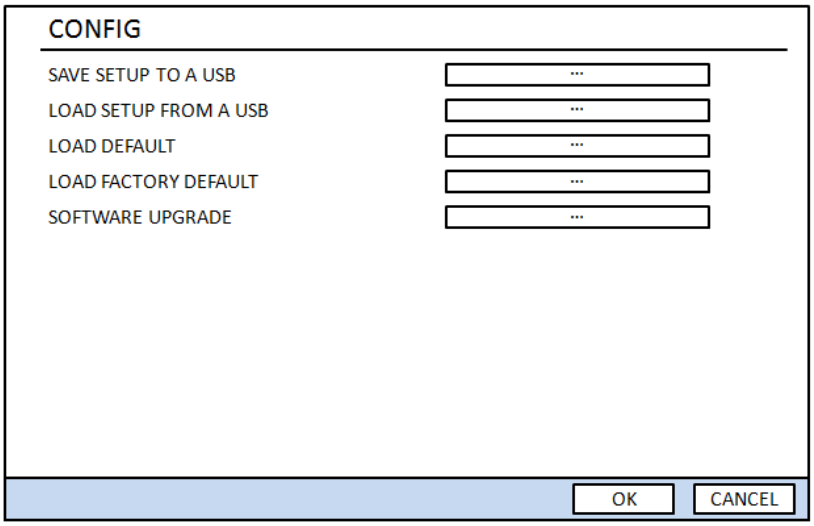
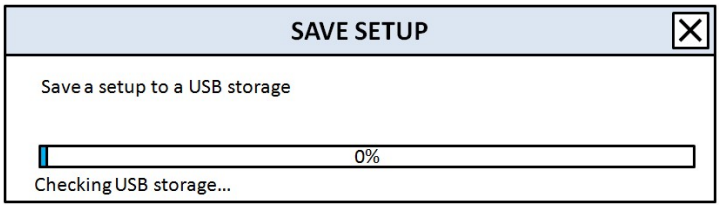
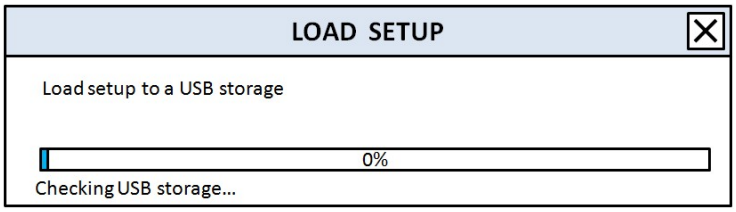
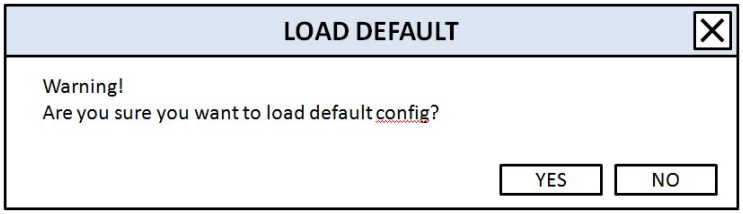
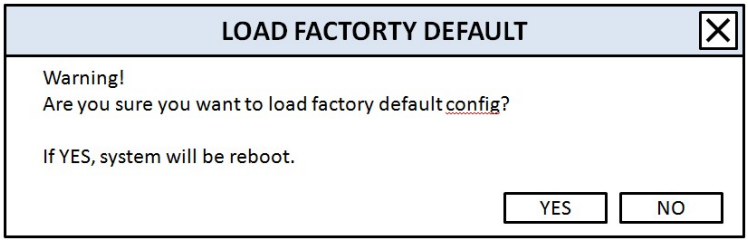


Figure 2.9.1 Configuration Setup Screen

Table 2.9.1 Configuration Setup

Item	Description
SAVE SETUP TO A USB	User can save the current configuration of the DVR to a USB flash drive. Plug in the USB flash on the front panel and press the button to start the saving process. 
LOAD SETUP FROM A USB	User can upload the configuration of the DVR to another DVR using the USB Flash drive. Plug in the USB flash drive on the front panel and press the button to start the loading process. 
LOAD DEFAULT	Press the button to reset the system to the default settings.  (The following settings such as **Language, DVR ID, Security User Authentication, Security User P/W, Date format, DLS settings, Network settings, HDD overwrite, Limit recording, HDD serial number,** and **HDD ERROR time** will not be included.)
LOAD FACTORY DEFAULT	Press the button to reset the system to the factory default settings. 
SOFTWARE UPGRADE	Upgrade software to the latest version. After connecting USB flash drive to USB port on the DVR, click SEARCH. It will automatically find the upgrade file.

3. Live, Search and Playback

3.1 Live Viewing Screen

In the Live screen, video inputs from the cameras are displayed as they are configured in the Display Setup screen. Various On-Screen Display (OSD) symbols, which indicate the status of the DVR, are described in Table 3.1.1.

Figure 3.1.1 Live Viewing Screen

The status bar hides automatically and appears again when moving the mouse cursor to the bottom of the screen.

Table 3.1.1 Status Indicator Icons in Live Viewing Screen

Icon	Description
	Power On/Off button
	Lock/Unlock Setup button
	Click the “Setup” button to go the setup menu.
	Click the “Audio” button to set an audio reception type: Audio Mute, 1 channel or 4 channels. To set just 1 channel, select a specific channel on the live screen.
	Click the “Search” button to enter the search menu.
	Click the “Backup” button to do a back-up.

	Click the “PTZ” button to open the PTZ control menu.
	Click the “Sequence” button to use a sequence function.
	Click the “Manual Record” button to enable manual recording.
	Click the “Alarm-Out Function (On/Off)” button to disable the alarm.
	Click the split-screen icon to change the current split-screen mode using the mouse or SEL button.
2009/04/14 17:23:40	Displays the current date and time
R:A	Remote control ID is displayed here. If a remote ID is not set, the message “A” (all) is displayed.
	Displays the amount of recording on the hard disk from 0~99%.
	Indicates that HDD is recycled
	Continuous recording in progress
	Manual recording in progress. To set the Manual recording mode, press the Record button on the front panel.
	Motion alarm recording in progress.
	Sensor recording in progress.
	Indicates that the lock is set
	Indicates that audio is muted; to toggle audio mute, press the Audio button on the front panel.
	Indicates Single audio; to set audio single for highlighted channel only, press the Audio button on the front panel.
	To mix audio display, press the Audio button on the left side.
	Indicates that alarm is set; to set the alarm function, press the Alarm button on the front panel.
	Indicates that alarm output is activated
	When there is an event (motion recording, video loss, HDD fail, or S.M.A.R.T), this icon will be highlighted.
	Indicates that a network client is connected to the DVR

	Indicates that sequencing mode is enabled

3.2 SEARCH Screen

To enter the search screen menu, select SEARCH menu on the screen using the mouse or press the SEARCH icon on the live screen.

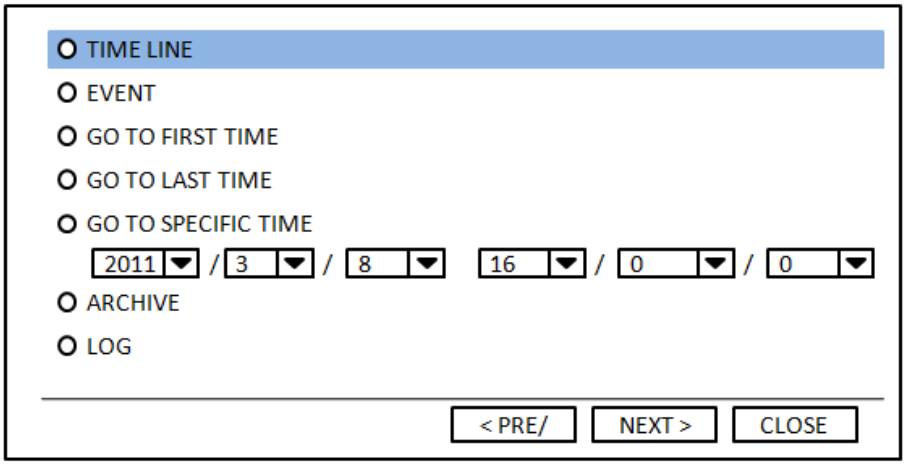
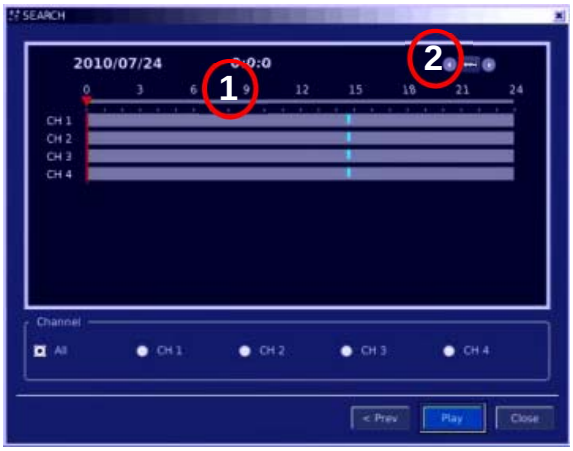


Figure 3.2.1 Search Screen

There are 7 ways to search: TIMELINE, EVENT, GO TO FIRST TIME, GO TO LAST TIME, GO TO SPECIFIC TIME, ARCHIVE and LOG.

How to Search Data from the Time-Line Using the Mouse

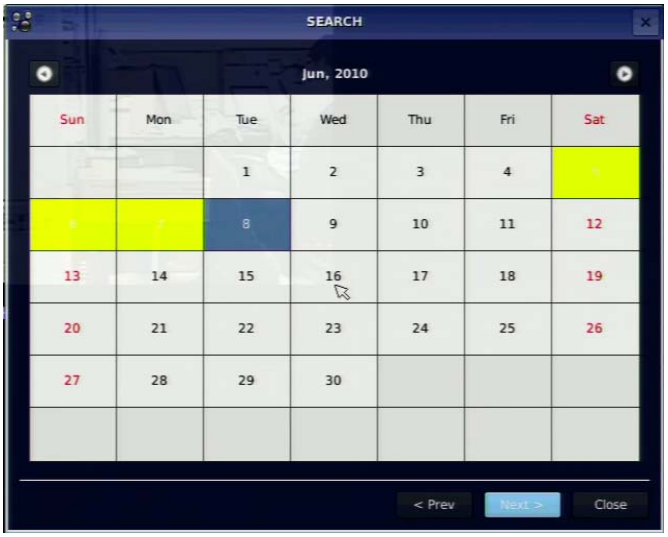


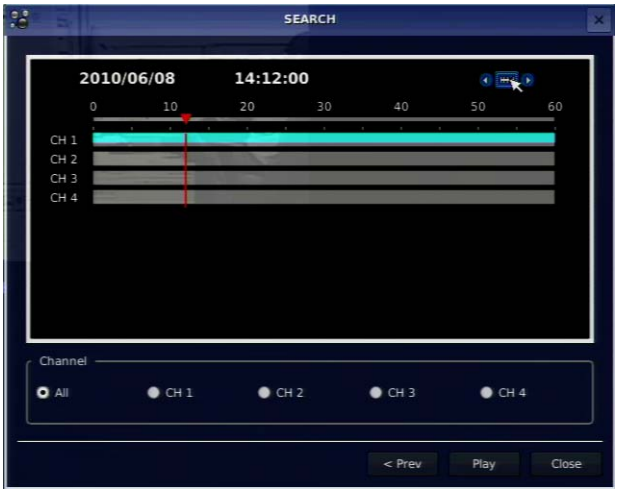
① Search time by the hour with this bar (user can also press rewind and fast forward buttons on the remote)

② Search time every 5 minutes with this bar (user can also press the control buttons on the remote)

3.2.1 TIME-LINE Search

The TIME-LINE search window is used to find the stored video by using the timeline bar.





When the Timeline menu is selected, the user can see a calendar containing the recorded data. Select a specific date and time. The slider bar can be dragged-and-dropped on the timeline to select a specific time. Press the PLAY button to play the video after selecting the specific time. Press PREV to return to the Main Search window.

3.2.2 Event Search

The Event Search window is used to find event-triggered video recordings.

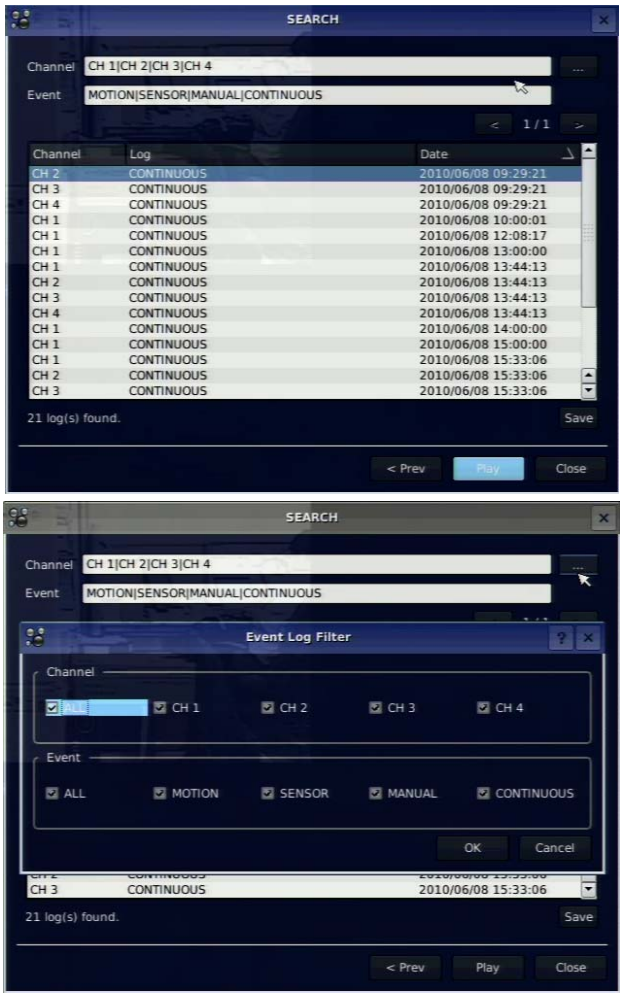


Figure 3.2.2 Event Search Screen

When the Event menu is selected, the user can see a calendar containing recorded data. Select a specific date and the event log will be displayed. Press the PLAY button to play back the data or the SAVE button to save the data as specified. User can find a recording of the specific channel and event. Press the PREV to return to the Search window.

3.2.3 Go to First Time

User can access the oldest recorded video on the DVR hard drive by selecting GO TO FIRST TIME in the SEARCH window. Press PREV to return to the Search window.

3.2.4 Go to Last Time

User can access the last minutes of recorded video on the DVR hard drive by selecting GO TO LAST TME on the SEARCH window. Press PREV to return to the Search window.

3.2.5 Go to Specific Time

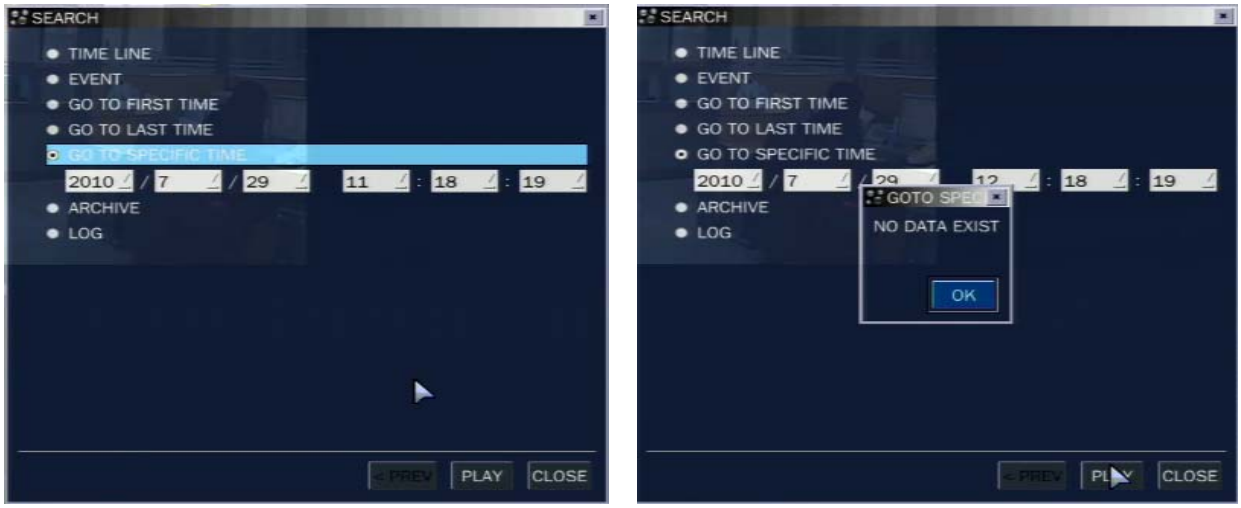


Figure 3.2.3 Go To Specific Time

User can search for video data from a specific instance by setting the date and time with GO TO SPECIFIC TIME. Use the mouse or the control buttons on the remote control to change the date and time value and press the PLAY button after making changes. If there is no video recorded at the set date and time, the message “No Data Exist” displays.

3.2.6 Archive Search

The ARCHIVE Search window is used to find previously stored video or images.

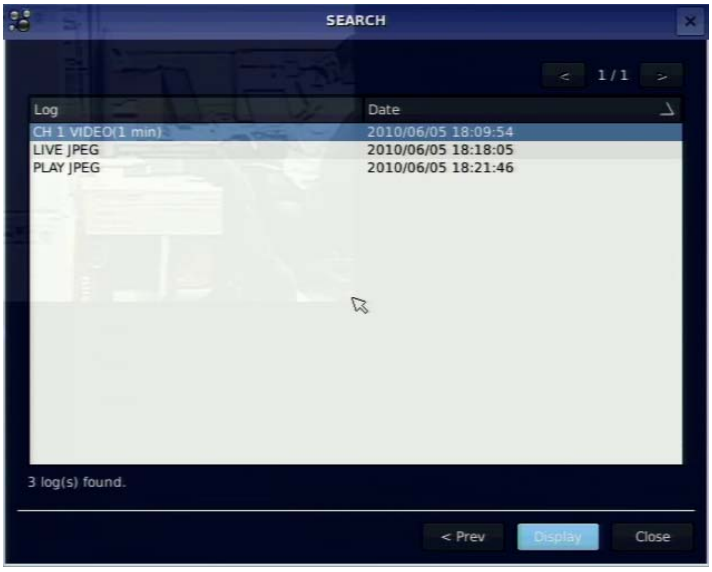


Figure 3.2.4 Archive Search Screen

When the Archive menu is selected, the user can see a calendar containing recording data. Select a specific date and the archived data will be displayed. Press the Display button to view the still-image or the first frame of the selected video, and then the user can save the selected data.

3.2.7 Log Search

User can access the Log search list screen by selecting LOG on the SEARCH window.

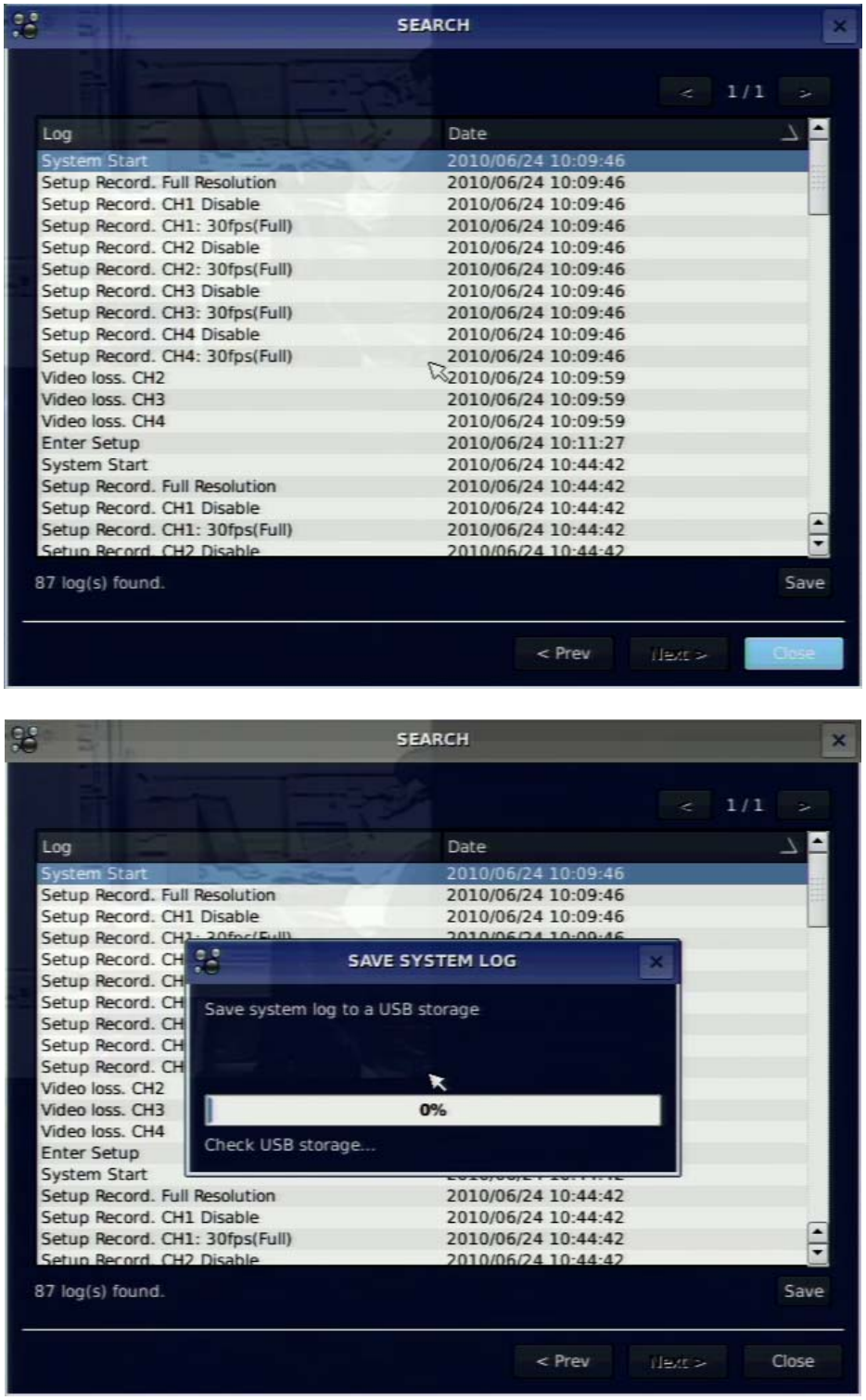


Figure 3.2.5 Log Search Screen

When the Log menu is selected, the user can see a calendar containing recording data. Select a specific date and press the NEXT button; the log data will be displayed. Press the SAVE button to save the data; the data is saved in a text file format.

3.3 Play Mode

During playback of a recorded event, the mode changes from SEARCH to PLAY. While in PLAY mode, you may return to the SEARCH screen by pressing the X button on the status bar or the ESC button on the remote control.

Figure 3.3.1 PLAY Mode Screen

The status bar hides automatically and appears again when moving the mouse cursor to the bar.

Table 3.3.1 Button Functions in PLAY Mode

Button	Description
	Return to the previous menu screen, search window, or exit from the Menu.
◀◀	Press to rewind the footage at 1x, 2x and 4x speeds. Reverse playback speed is shown as -1x (normal), -2x (2 times normal), and -4x (4 times normal) at the bottom right of the screen.
--◀	Jump/Step backward The playback position moves 60 seconds backward.
▶/ II	Press to play or pause recorded video.
▶--	Jump/Step forward The playback position moves 60 seconds forward.
▶▶	Press to fast forward the footage at 1x, 2x, and 4x speeds. Playback speed is indicated as 1x (normal), 2x (2 times normal), and 4x (4 times normal) at the bottom right of the screen.
	Press to back-up the video.

4. PTZ Control

To control the PTZ functions of the camera, select PTZ menu on the screen using the mouse or the control buttons on the remote control. Select an item to control. Please refer to the table 4.1 for control details.

Figure 4.1 PTZ Control Screen

Table 4.1 Button Functions in PTZ Control

Item	Description
INITIALIZE	Initialize the PTZ settings of the selected camera.
PAN / TILT	Select PAN/TILT using the mouse or the control buttons and press SEL button on the remote control. Adjust the tilt (UP/DOWN) / pan (LEFT/RIGHT) position using the mouse or the control buttons on the remote control.
ZOOM / FOCUS	Select ZOOM/FOCUS using the mouse or the control buttons and press SEL button on the remote control. Adjust the zoom (Mouse Wheel Down or Up/Down button of the remote control). Adjust the focus (Mouse Wheel Up or Left/Right button of the remote control) position.
OSD	Select OSD to enter the OSD menu. Control keys are Right, Left, Up, Down, Select, Far (REW KEY), and Near (FF KEY). Press the ESC button to return to the main menu. Press the PTZ button to escape from the OSD menu.
AUTOSCAN	Press the right key (▶) on the control buttons to start auto scan. Press the left key (◀) on the control buttons to stop auto scan.
PRESET	Select the PRESET and press the left key (◀) on the control buttons. The number input window will appear. Set the number (3 digits) using the number key and press SEL to set the preset number for the current position. Press the right key (▶) on the control buttons and set the number (3 digits) to go to the preset number.
TOUR	Select TOUR and press the right key (▶) on the control buttons. The number input window will appear. Set the number (1 digit) using the number key and press SEL to start the tour. Press the left key (◀) on the control buttons to stop the tour. The user can set the preset number in the tour group of the OSD menu.
NUMBER	Available only in the TOUR and PRESET menus.
	Press the ESC button to return to the main menu.

- **Preset/ Tour/ OSD/ Auto-scan function are available on the specific model AP8777 and PMA-200.** (Select it in the NAME of PTZ setup menu)

5. Back Up

5.1 Backing up an Image onto USB Flash Drive or External Hard Drive

Still-images can be captured and archived onto a USB flash drive or External Hard Drive in live mode or while playing back recorded video. In live mode, press the BACKUP button to launch the archive function or select BACK UP menu on the screen with the mouse.

1. Select a specific channel to back up on the live screen.
2. Press BACKUP button and the archiving screen will appear as displayed in Figure 5.1.1.
3. Press “Backup” button and the system will start the archive the data to the selected media.

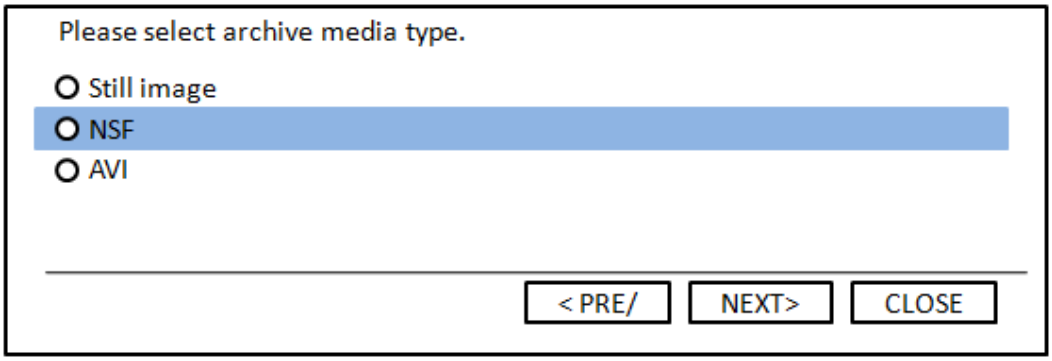


Figure 5.1.1 Still Image Archiving and Backup Screen

NOTICE For a backup using a USB flash drive, the file format of the flash drive has to be FAT32.

5.2 Video Backup onto USB Flash Drive

Video can be captured and archived onto the USB flash drive or an External Hard Drive while playing back the recorded video.

In playback mode, press the BACKUP button to launch the archiving function.

1. When you press BACKUP button, the DVR will ask whether to archive a Still Image or Video Clip.
2. If the user selects VIDEO CLIP, the DVR will ask for the channel, file format and the setting of the archiving duration. If the duration is set from 1 hour to 24 hours, a “large backup” will be created. After the user sets the channel, file format, and duration, the DVR will ask which media is to be used for archiving.
3. After selecting the media, the system will start to archive the data.

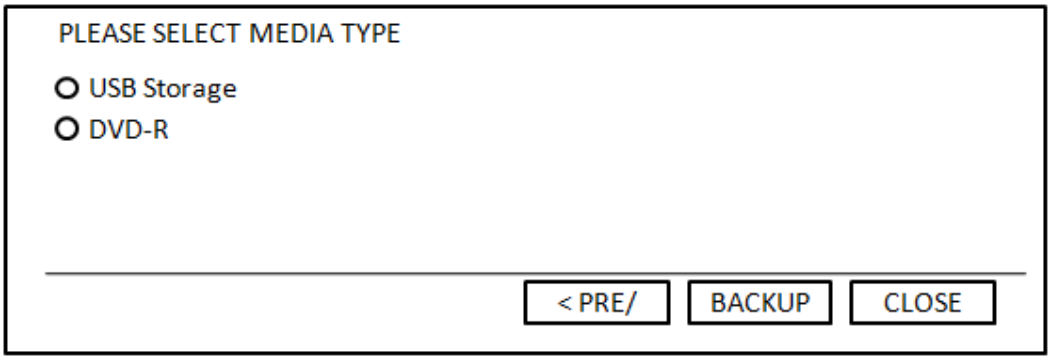


Figure 5.2.1 Video Archiving and Backup Screen

The DVR will convert the corresponding portion of the video into an AVI file.

5.3 Transferring Still Images or Video from the ARCHIVE List

The stored data in the hard drive can be found in the ARCHIVE list in the Search window.

User can back up still images or video into the storage device from the ARCHIVE list.

1. Select the date to begin searching and navigate through the days using the mouse or the control buttons on the remote control.
2. Once you have selected the date, press the NEXT button to open the list of stored data.
3. Use the mouse or the control buttons on the remote control to scroll through the archive list.
4. Select a list of stored events that happened previously or after the current selection.
5. Once the desired event has been selected, press the DISPLAY button to view the still image or the first frame of the selected video.
6. Press the BACKUP button to launch the archiving function in playback mode.
7. Press the CLOSE button to return to the SEARCH window.

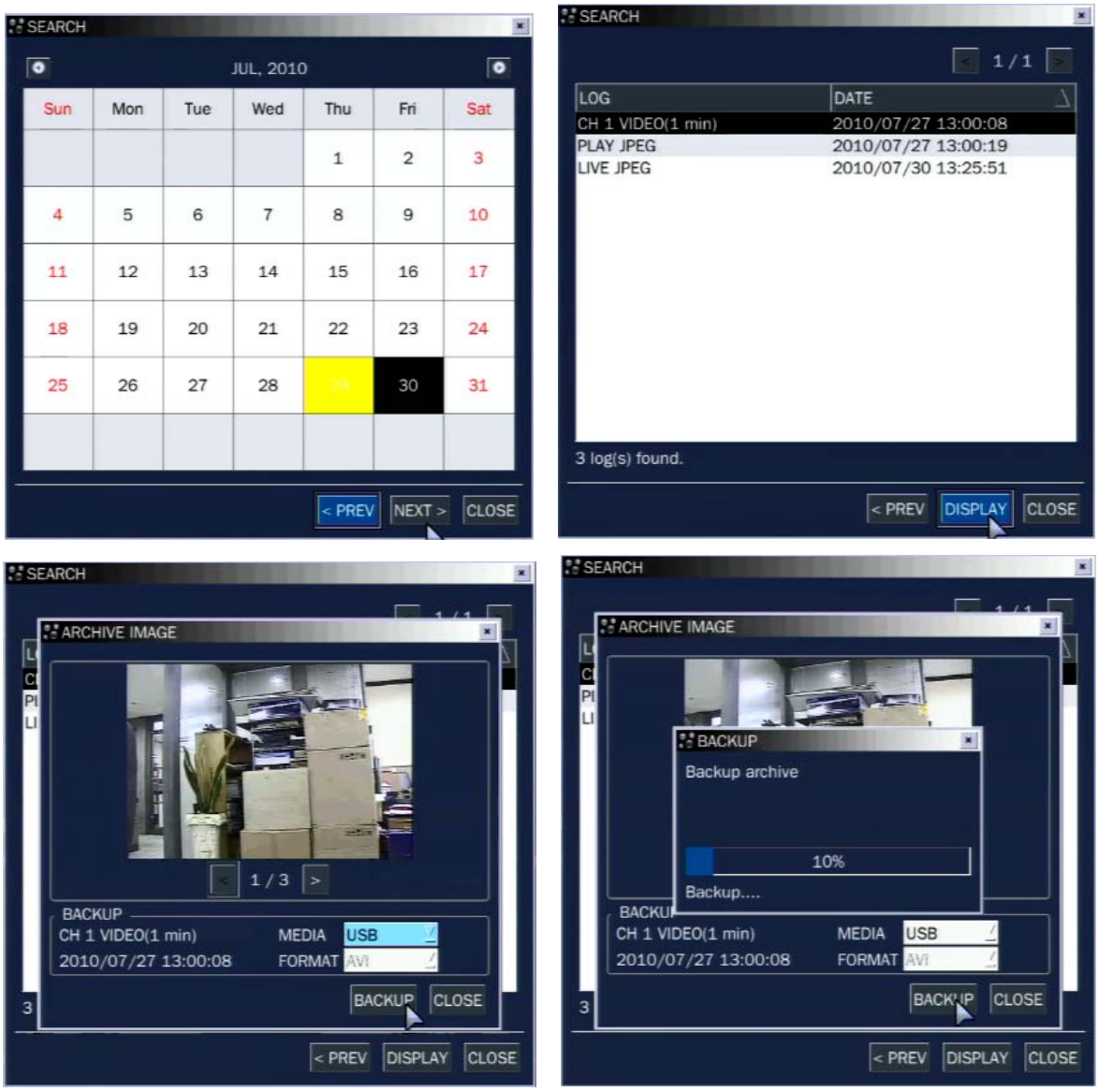


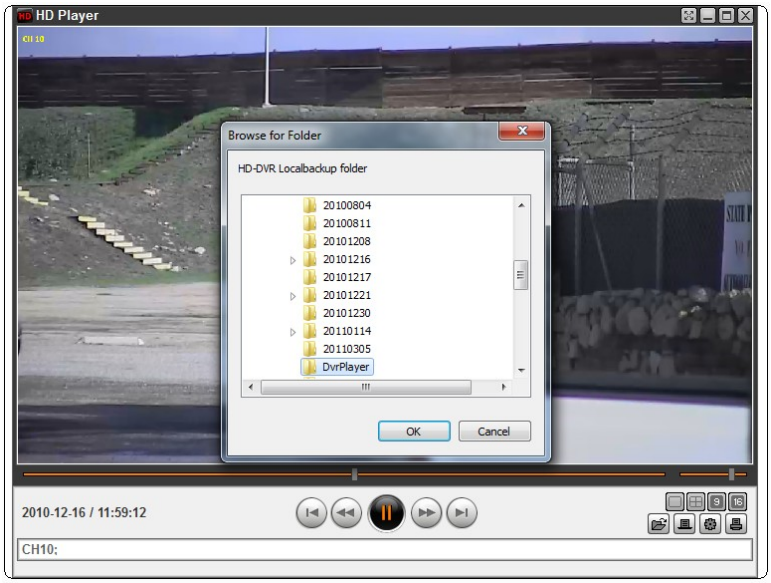
Figure 5.3.1 Archive Search Screen

5.4 Playback of Backup Video

- AVI format: Video in the AVI format can be played back using Window Media Player™ or other media players compatible with video in the AVI format.
- NSF format: Video in the H.264 format can be played back using the HD player utilized exclusively by the DVR, which will be copied on USB flash drives alongside video. This format is only available when the user selects a large backup.

  Three files are copied on USB flash drive:

  - H.264 file: Video file in H.264 format.
  - INDEX file: Title file with date and time.
  - HD PLAYER: Exclusive video viewer for large backups.



6. Network Access Using the Multi-Site Software

6.1 Overview

The Multi-Client is a multiple site monitoring client software with video, audio, and alarm signals from the DVRs over networks. The Multi-Client does not limit the number of DVR units you can register.

The program displays to up 256 live video channels on one display and even allows playback video channels on the same or alternate display monitors.

The user may control PTZ cameras on the DVRs through the Multi-Client as well. If the user attaches a microphone and speaker system the Multi-Client PC and DVR, the user may use two-way audio to communicate over the network.

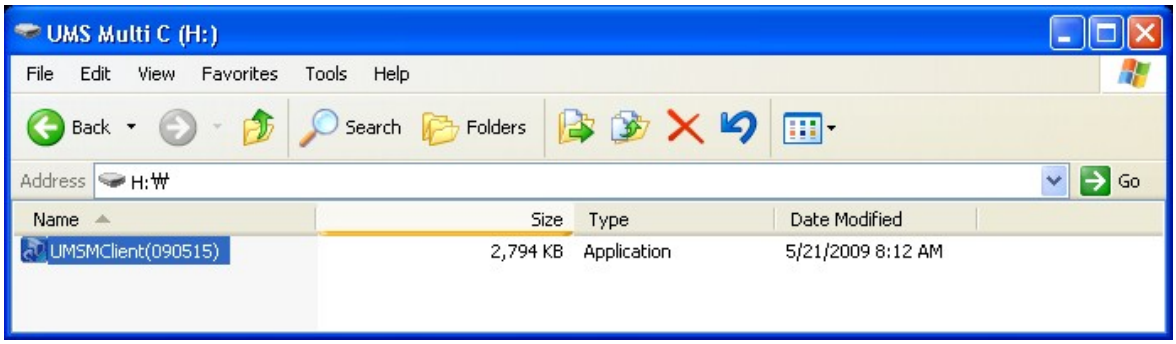
6.2 Minimum PC Requirements

CPU	Intel Pentium IV
	2Ghz
Memory	512MB or higher is recommended.
VGA	128MB or higher is recommended.
Resolution	1024x768
Disk space	1GB
OS	Windows 2000, XP Professional, XP Home, or Vista (Some versions of Vista have problems with installation. Please contact your vendor for more information.)
Network	10/100Base T
Others	Direct X 8.1 or Higher

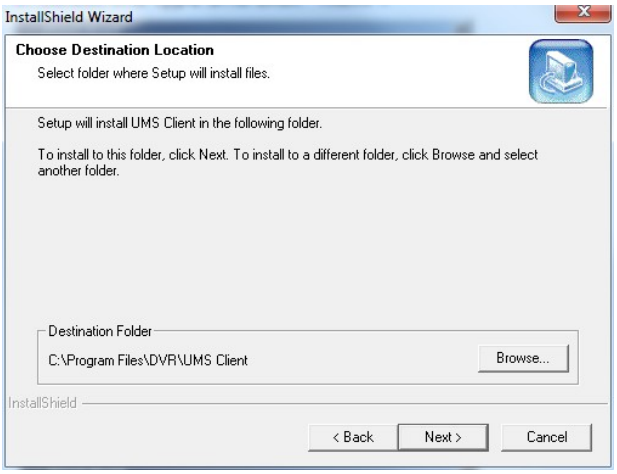
Before installing the program, check the PC specifications. The DVR remote software may not perform correctly if the PC does not meet the minimum requirements.

6.3 Installation of the Program

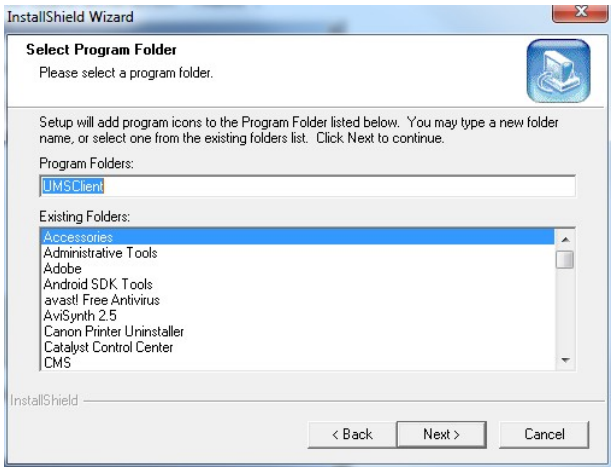
1. Insert the provided CD in the CD drive and double-click “Multi-Client (XXXX)**.exe**”


UMS Multi C (H:)
File Edit View Favorites Tools Help
Back Search Folders
Address H:₩
Go
Name Size Type Date Modified
UMSMClient(090515) 2,794 KB Application 5/21/2009 8:12 AM

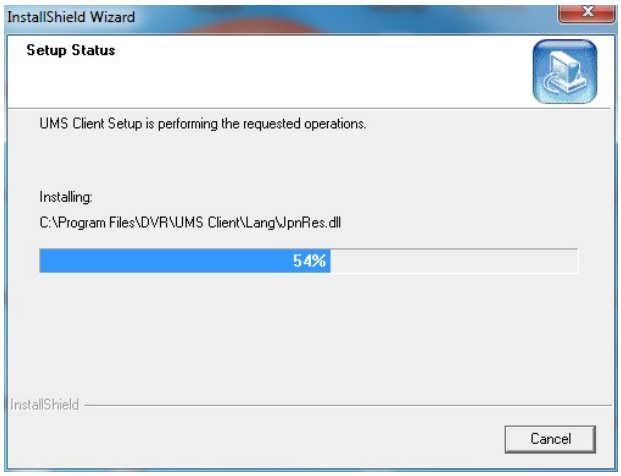
2. Select a destination folder and click “Next.”


InstallShield Wizard
Choose Destination Location
Select folder where Setup will install files.
Setup will install UMS Client in the following folder.
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.
Destination Folder
C:\Program Files\DVR\UMS Client
Browse...
InstallShield
< Back
Next >
Cancel

3. Select the program folder and click “Next.”



4. The installation status screen is displayed.



5. After the installation is completed, the **"Multi-Client"** icon is displayed on the desktop.

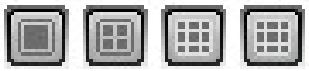
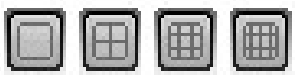
6.4 Live Window

Double-click the **"Multi-Client"** icon on your desktop to start the Multi-Client program.

6.4.1 Main User Interface

6.4.2. Control buttons

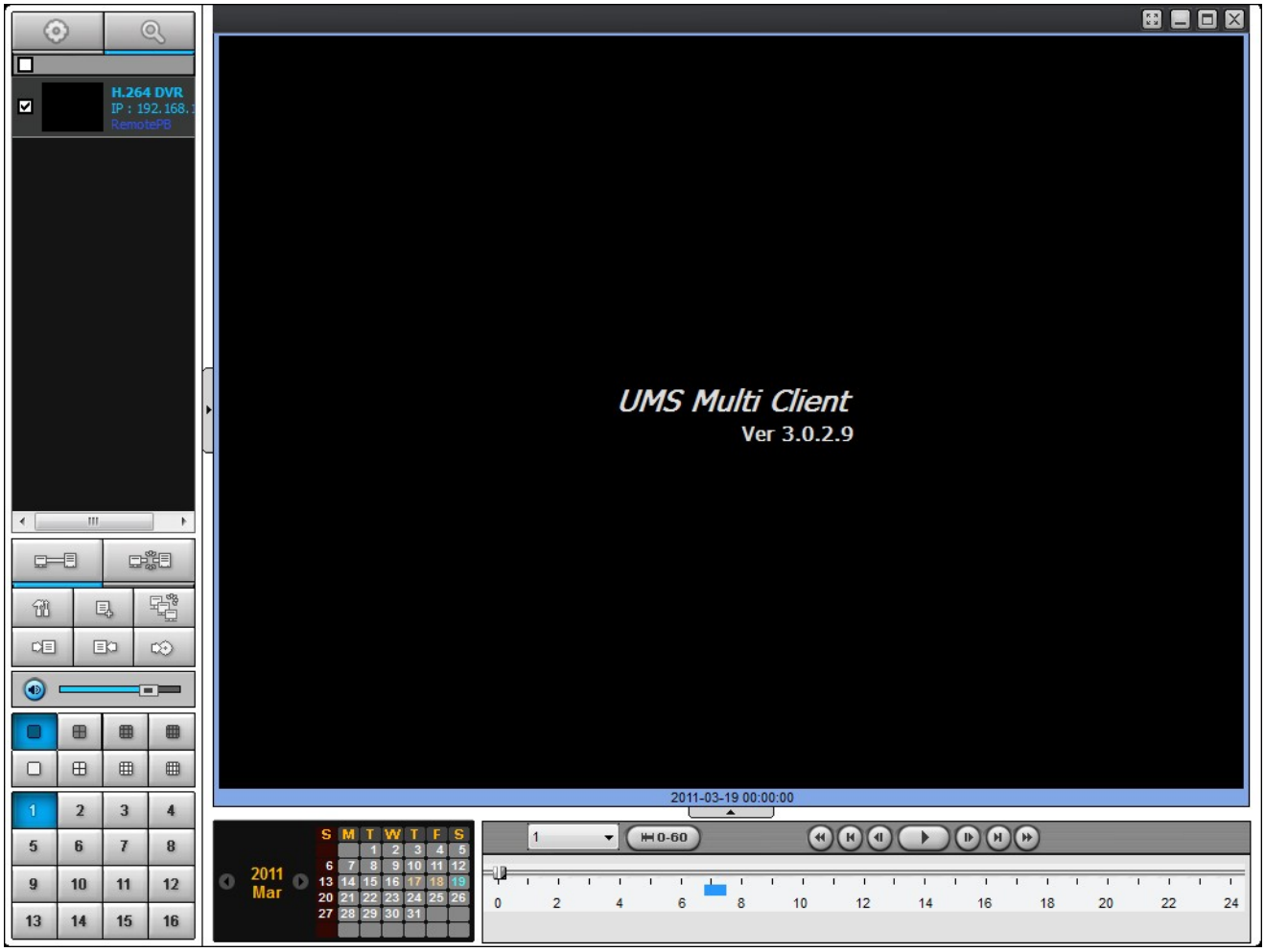
Buttons	Description
LOCAL PLAYBACK	Left-click this icon to open a playback window to search and play videos that are recorded on the local PC.
REMOTE PLAYBACK	Left-click this icon to open a playback window to search and play videos that are recorded on the remote DVR.

 SITE MANAGEMENT	THUMBNAIL REFRESH: Left-click this icon to refresh and renew thumbnail image of the connected sites. SITE ADDITION: Left-click this icon to open the "Site Addition" window. SITE DELETE: Left-click this icon to delete site from the index window after disconnecting a site. NET FINDER: Select the site from the index window and click this icon to modify the information of the specific site.
CONNECT	Left-click this icon to connect the selected site/sites.
DISCONNECT	Left-click this icon to disconnect the selected site/sites.
SETUP	Left-click this icon to setup the configuration for the Multi-Client.
CAPTURE	Left-click this icon to capture a still-image.
EVENT LIST	Opens list of events logged by the Multi-Client
PAUSE	Left-click this icon to play/pause live video.
ALARM ON	Left-click this icon to manually start an alarm event; left-click again to end the event. The event will show up in EVENT LIST.
RECORD ON	Enables/disables recording of live video to local the disk which has been set in the setup menu
AUDIO	Adjust the audio volume with the control bar.
MIC	Adjust the microphone volume with the control bar.
	Control PAN/TILT & ZOOM/FOCUS. PAN left / PAN right TILT up / Tilt down ZOOM in/out FOCUS in/out
 CHANNEL SPLIT	Select the numbers of cameras to be displayed (Single, quad, 9 channels, or 16 channels).
 DVR SITE SPLIT	Select the numbers of DVR/DVRs to be displayed (1 DVR, 4 DVRs, 9 DVRs, or 16 DVRs).

6.5 Search and Playback Window

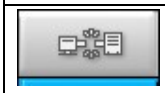
6.5.1 Main User Interface

Left-click the “Search” Icon in the upper-left of the Live Window to open the search window (Local Playback / Remote Playback).



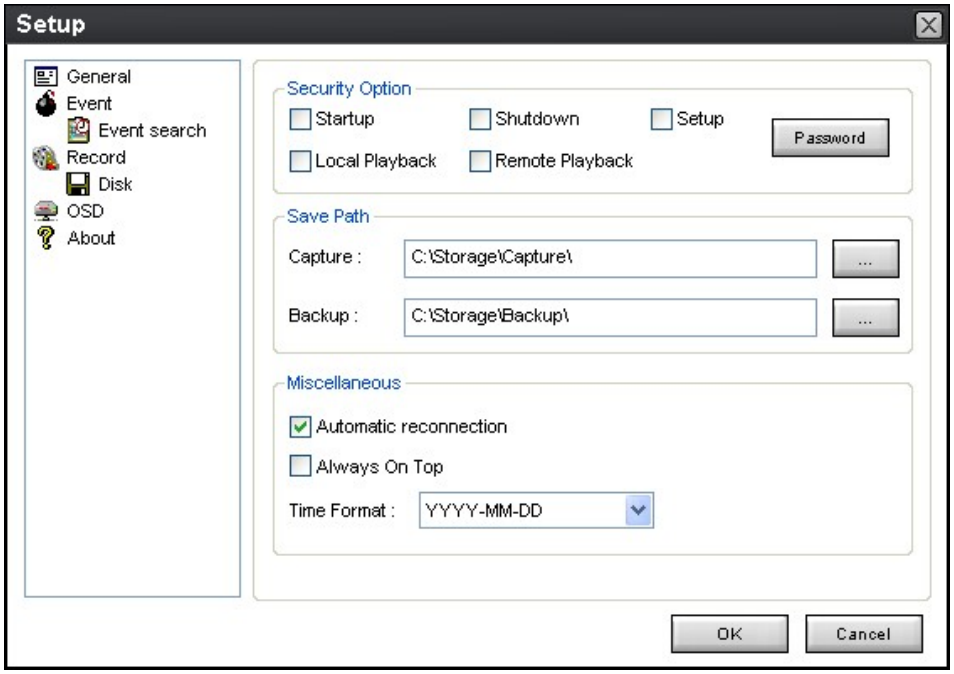
6.5.2 Main Control Panel

Buttons	Description
LOCAL PLAYBACK	Left-click this icon to open a playback window to search and play videos that are recorded on the local PC.
REMOTE PLAYBACK	Left-click this icon to open a playback window to search and play videos that are recorded on the remote DVR.
	Directory window displays the registered site/sites

CONNECT	Left-click this icon to connect the selected site/sites.
 DISCONNECT	Left-click this icon to disconnect the selected site/sites.
SETUP	Left-click this icon to setup configuration of Multi-Client.
CAPTURE	Left-click this icon to capture a still-image.
EVENT LIST	Opens list of events logged by the UMS Multi Client
MARK IN	Left-click this icon to set the start time for backup of the recorded video in AVI format.
MARK OUT	Left-click this icon to set the end time for backup of the recorded video in AVI format.
BACKUP	Left-click this icon to back up the recorded video in the AVI format.
AUDIO	Set the audio volume level with the control bar.
	Select the number of DVR(s) [1 DVR, 4 DVRs, 9 DVRs, or 16 DVRs] on the main display screen.
	Select the number of channel(s) [Single, quad, 9 channels, or 16 channels] to display.
	Select the channel to playback.
	Recorded dates on the calendar are signified with color.
	Displays the recorded data of the selected channel or all channels on a timeline
	To change a timeline scale from 24 hours to 60 minutes. Recorded data on the timeline are signified with color. The user can adjust the timeline scale and move it to the desired playback time and then left-click the play icon to display the recorded video.
	Playback buttons

6.6 Setup of Multi-Client Software

Left-click the setup icon to open the setup of the Multi-Client Software.



6.6.1 General

6.6.1.1 Security Option: Setup a password for the security options.

Select security options (user privileges) and create a password.

A password will be required whenever a user attempts to access any of the selected functions.

6.6.1.2 Save Path: Specify a location to save captured still-images for data Capture and Backup.

6.6.1.3 Miscellaneous

Automatic reconnection: If the network is disconnected, the client software will automatically reconnect to the DVRs when able.

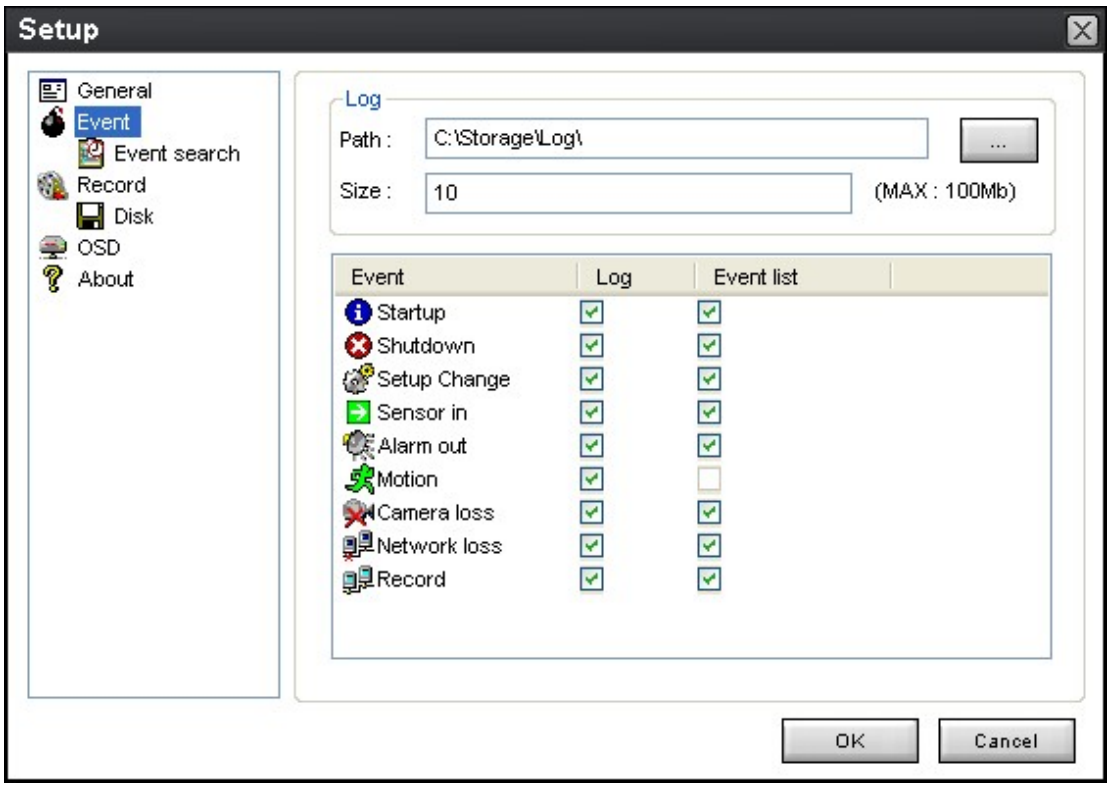
Always On Top: When checked, the Multi-Client Software will display in front of all other PC windows at all times.

Time Format: Adjust the way the Multi-Client Software displays the time (Standard 12HR or military time).

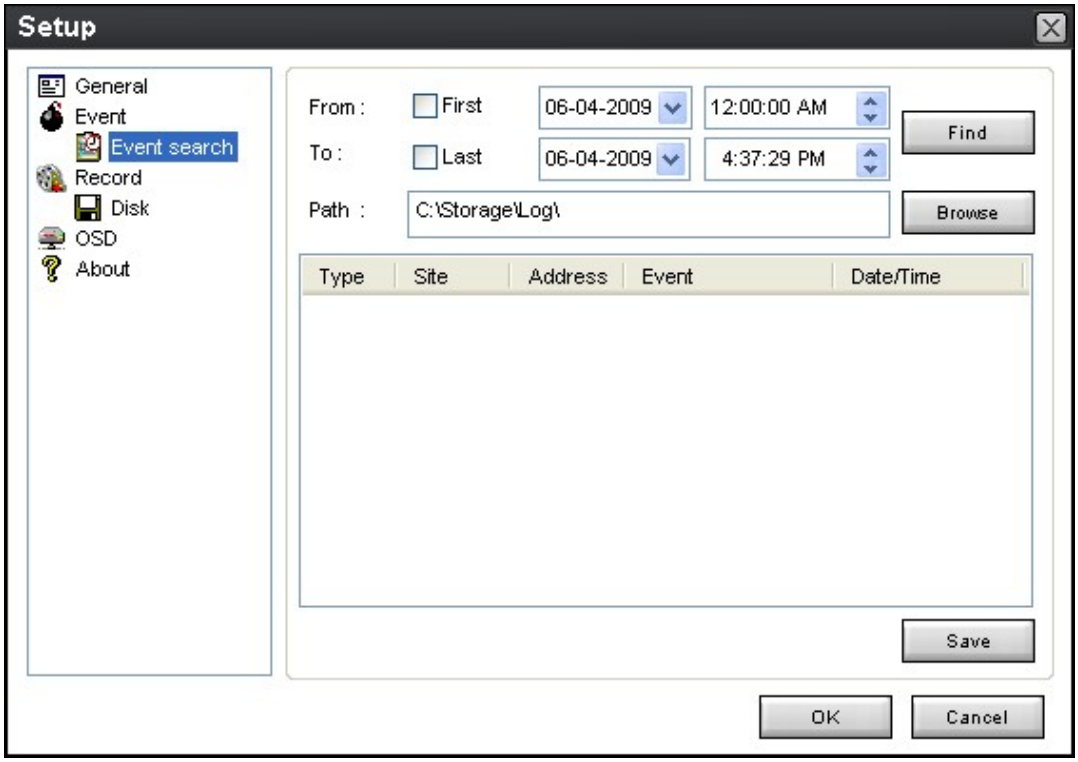
6.6.2 Event

Event logs can be archived and searched.

6.6.2.1 Archiving Event Log: Determine the location and size of the event logs and the events to archive.

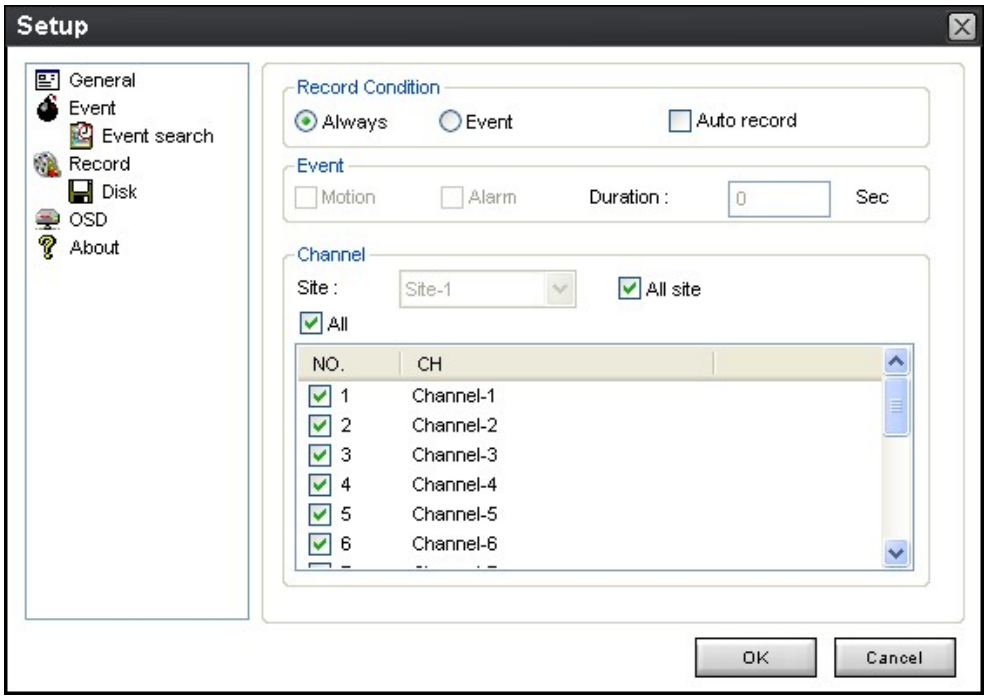


6.6.2.2 Archiving Event Log: Event logs can be searched from specific timelines.

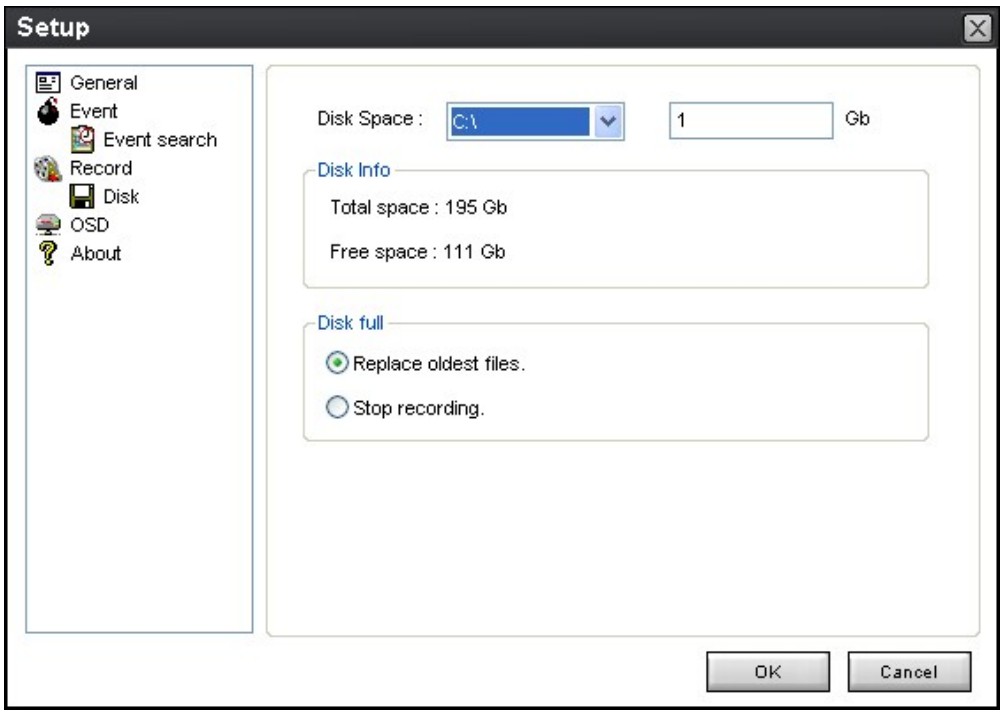


6.6.3 Record

6.6.3.1 Record Setup: The recording can be set as to “Always,” “Event,” or “Auto record.” Additionally, it can be set-up for specific DVRs and/or channels. When the Multi-Client Software is set for Event Recording, it will record motion or alarm events with a preset duration.

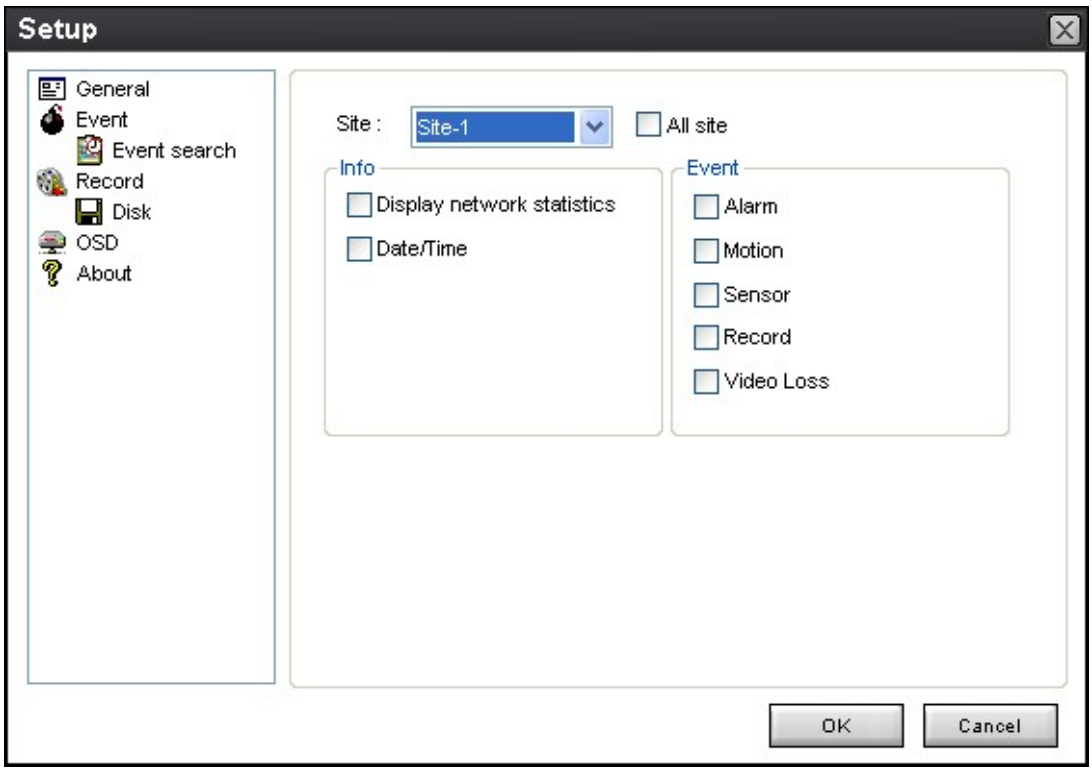


6.6.3.2 Local Storage Setup (Recording): Select the local recording drive and the amount of disk to use for recording. Select the option to overwrite data or stop recording when the maximum amount of disk space is full.



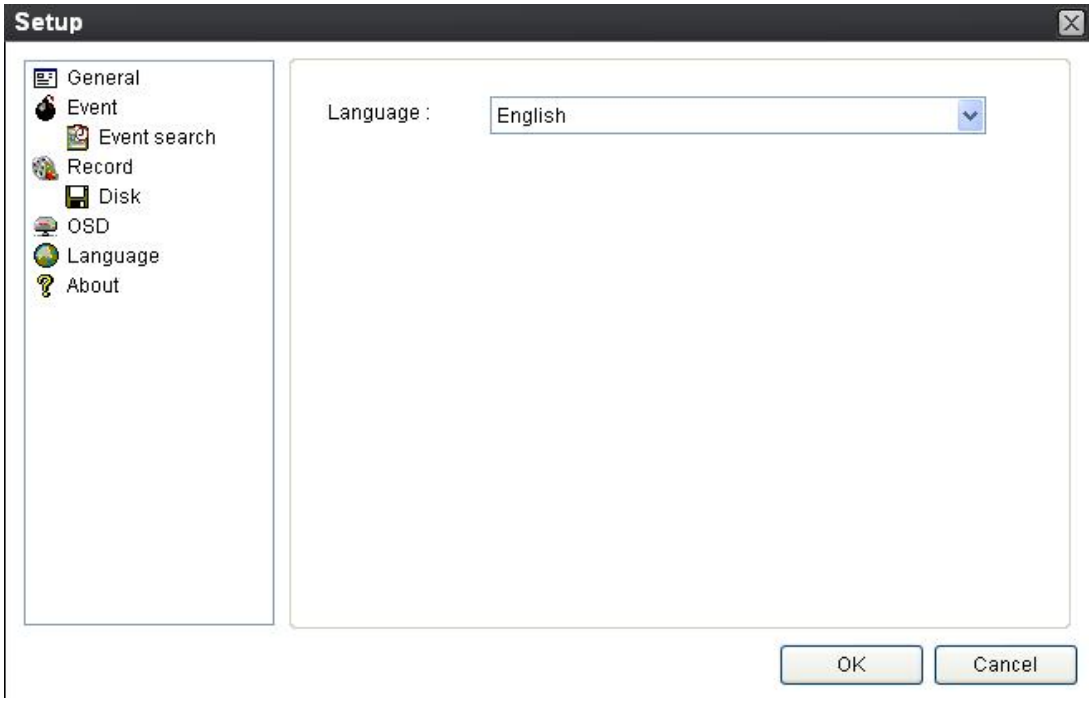
6.6.4 On Screen Display (OSD)

Select the On Screen Display (OSD) to display network usage, date and time, and events.



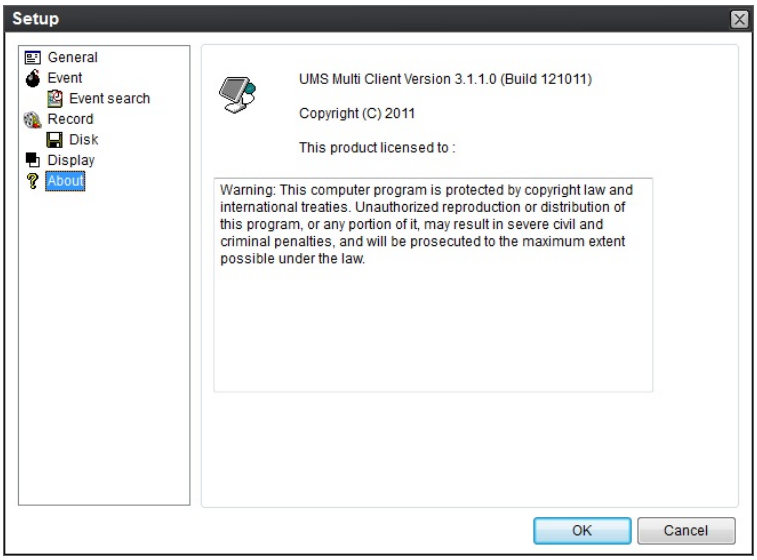
6.6.5 Language

Select the appropriate language.



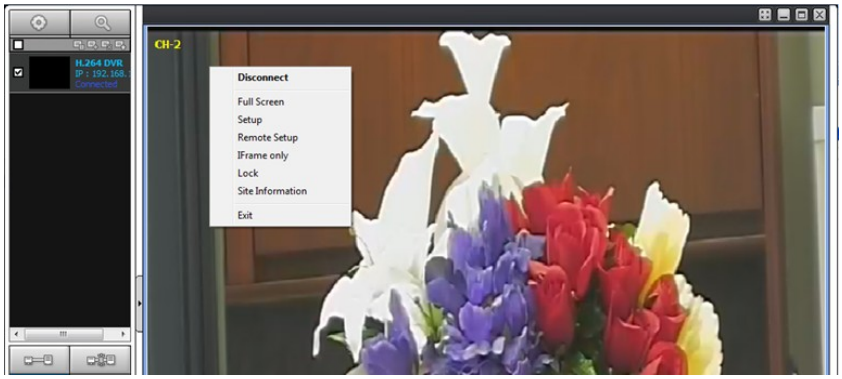
6.6.6 About

"About" displays the Multi-Client version information.


Setup
General
Event
Event search
Record
Disk
Display
About
UMS Multi Client Version 3.1.1.0 (Build 121011)
Copyright (C) 2011
This product licensed to :
Warning: This computer program is protected by copyright law and international treaties. Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under the law.
OK
Cancel

6.7 Remote Setup

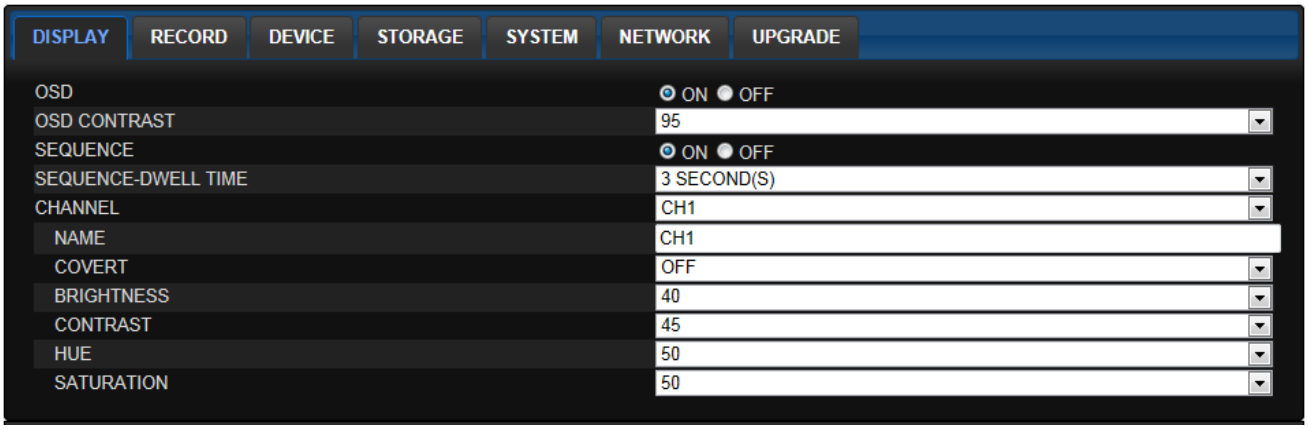
The DVR Remote Setup can be accessed from a Remote PC via the Multi-Client Software. Connect to a site, hover over a channel with the mouse, and right-click. When the following window is displayed, click "Remote Setup" and enter the password to open "WEB Setup."



Refer to the corresponding pages for details on the Setup items.

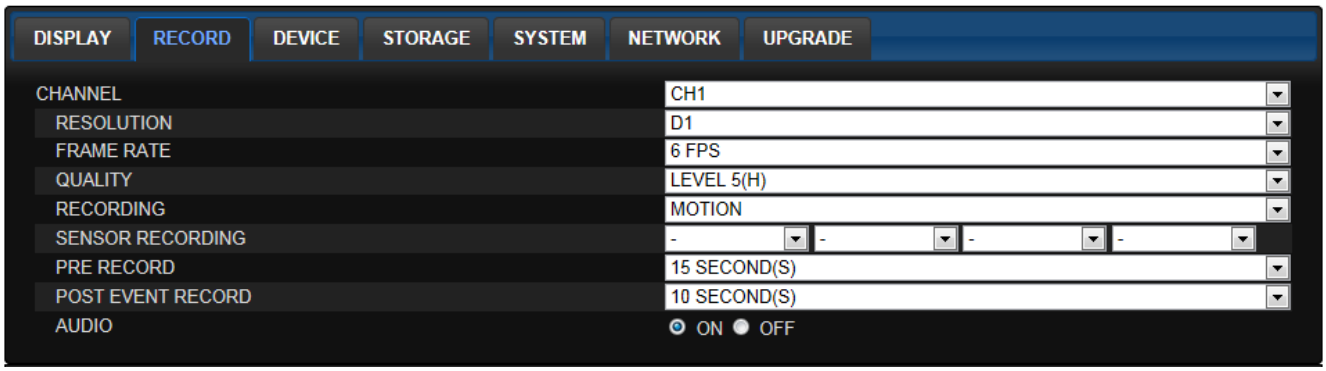
6.7.1 Display Settings

Select **Display** to set the live video display conditions.



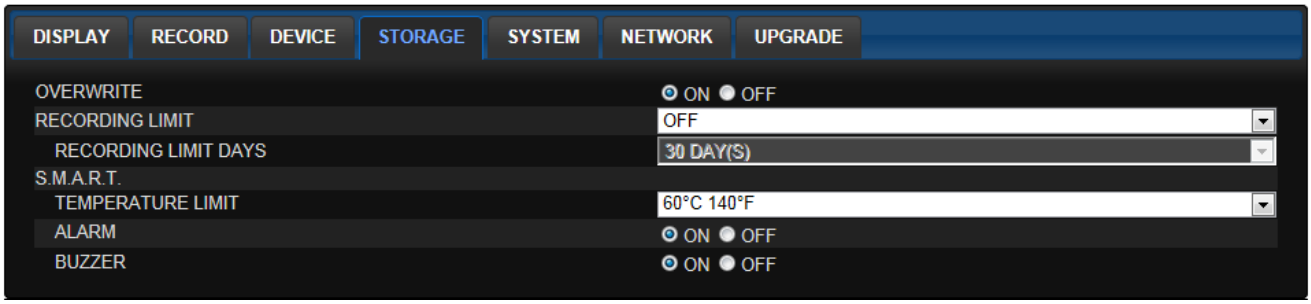
6.7.2 Record

Select **Record** to set the recording conditions.



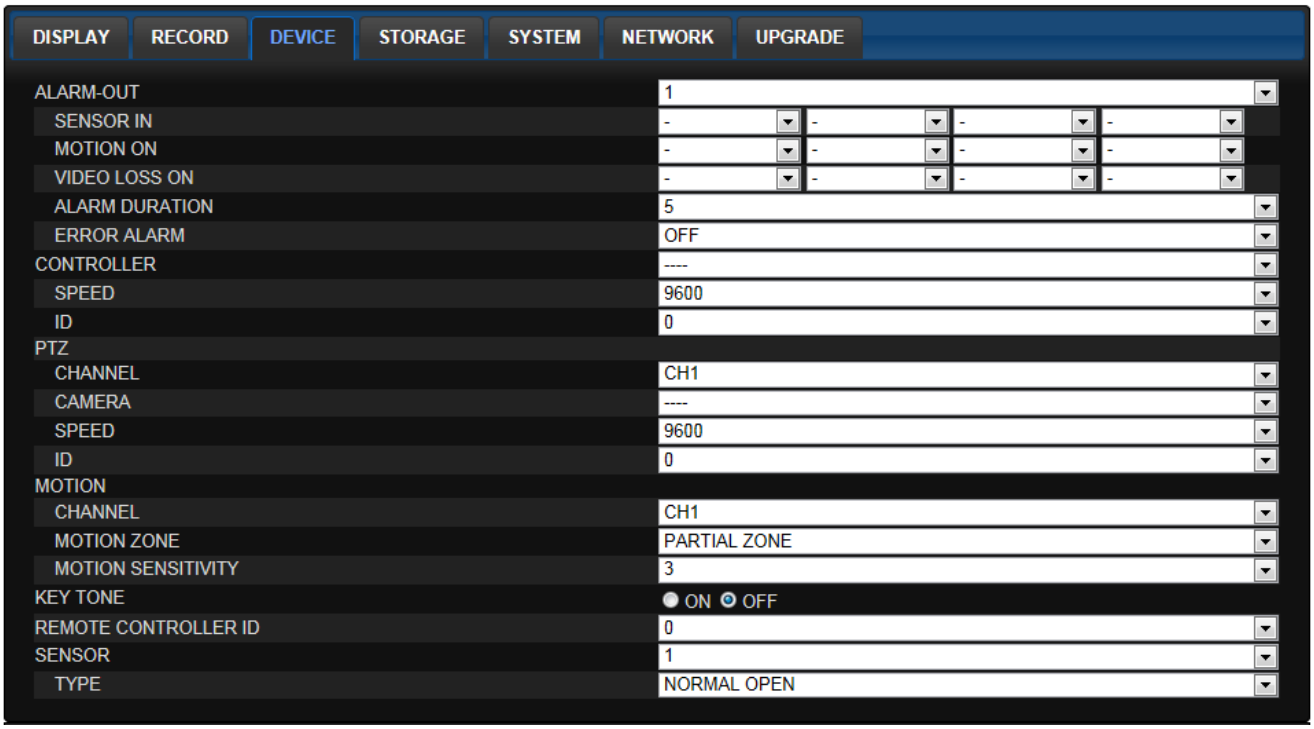
6.7.3 Storage

Select **Storage** to configure the recording settings and the storage period for the recording data.



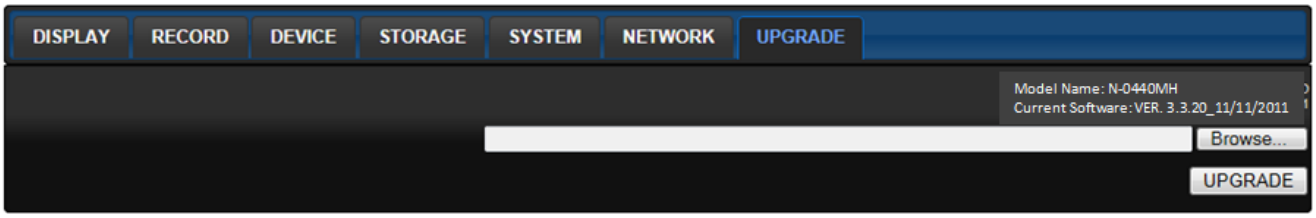
6.7.4 Device

Select **Device** to set the motion zone, sensor input/alarm output, PTZ control, and spot setting conditions.



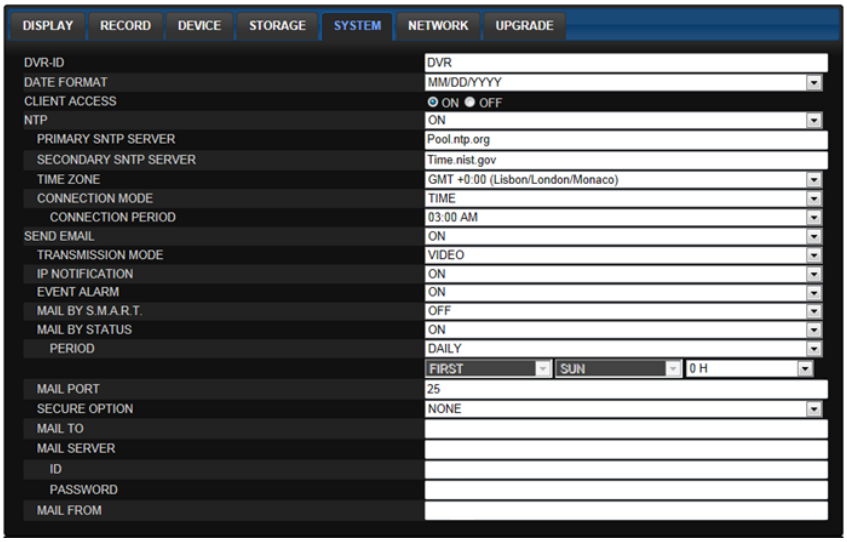
6.7.5 Upgrade

Select Upgrade to upgrade the firmware remotely from the Multi-Client Software.



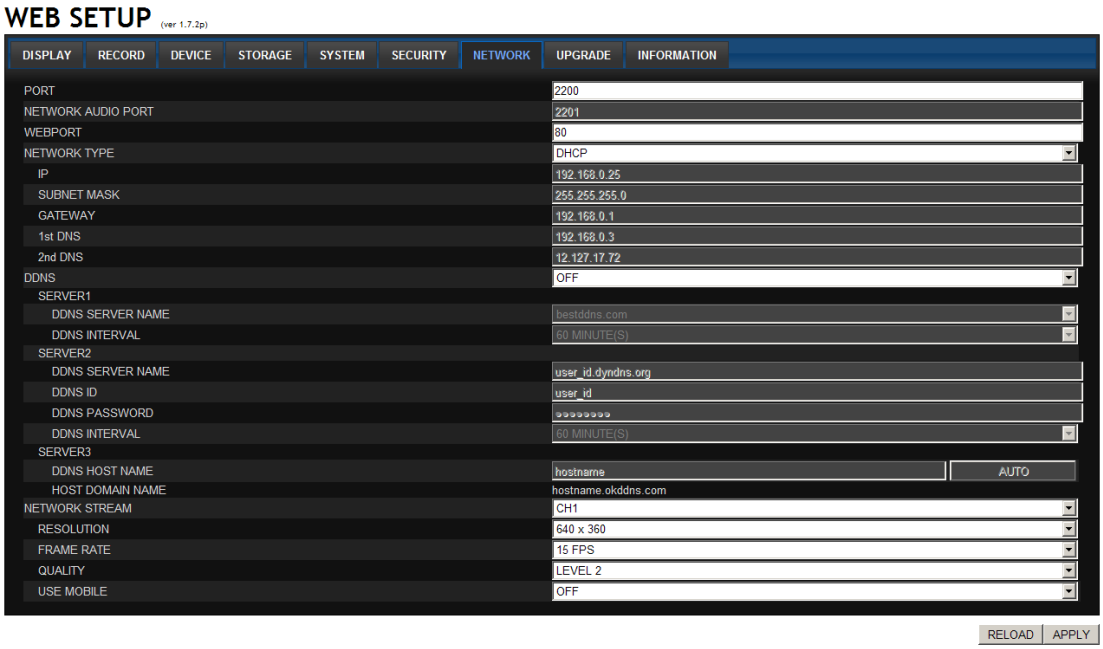
6.7.6 System

Select **System** to set system and time settings.



6.7.7 Network

Select **Network** to set up the Network information of the DVR.

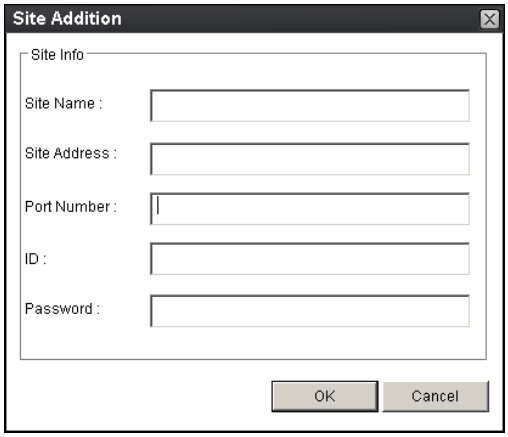


6.8 Operation

6.8.1 Addition, Deletion, and Modification of DVR Sites

6.8.1.1 Addition of Sites

1. Click SITE ADDITION button, and then a window will be displayed as below.



- Site Name: Input a name that properly describes the site.
- Site Address: Input IP Address (public IP address of a router that DVR is connected) or Domain name registered at www.ddnscenter.com.
- Port No.: Input port number of DVR. **Default Port Number is "2100" for 960(H) DVR's and "2200" for Megapixel DVR's.**
- ID: Input ID of DVR. **Default ID is "admin."**
- Password: Input network password of DVR. **Default Password is "1111."**

2. Click OK button. And then the registered site is added on the directory window.

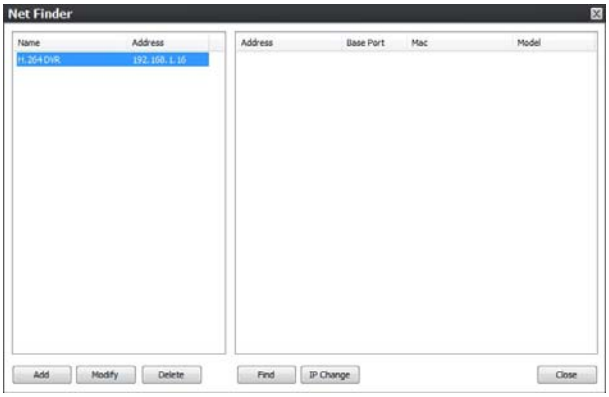
6.8.1.2 Deletion of Sites

1. Select the site/sites to delete from the directory window.

2. Left-click "SITE DELETE" button to delete the selected site/sites.

6.8.1.3 Modification of Sites

1. Left-click "NET FINDER" button. A window will be displayed as below.



2. Left-click “MODIFY” button to modify the connection information. Left-click “OK” to save the changes.

6.8.2 Connect and Disconnect

6.8.2.1 Connect

1. Select site/sites to connect from the directory window.

2. Left-click “CONNECT” button to connect to the selected sites.

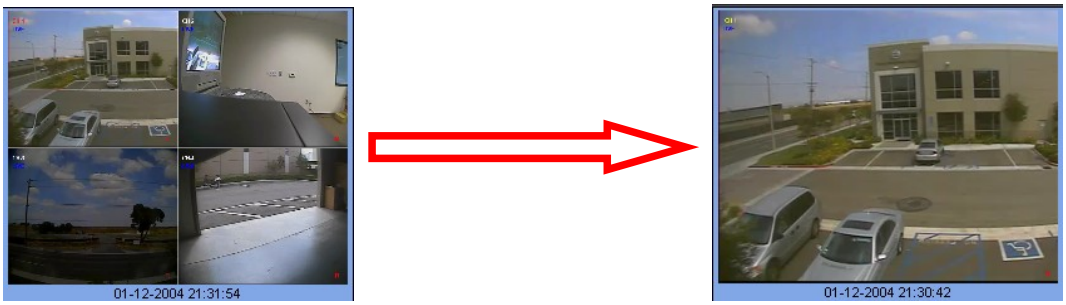
6.8.2.2 Disconnect

1. Select site/sites to disconnect from the directory window.

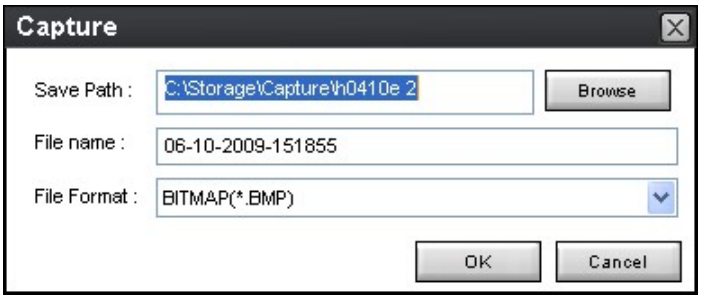
2. Left-click “DISCONNECT” button to disconnect from the selected sites.

7.8.3 Capturing an Image from Live Mode

1. Double-click a channel to capture from the display screen (otherwise all channels will be captured).

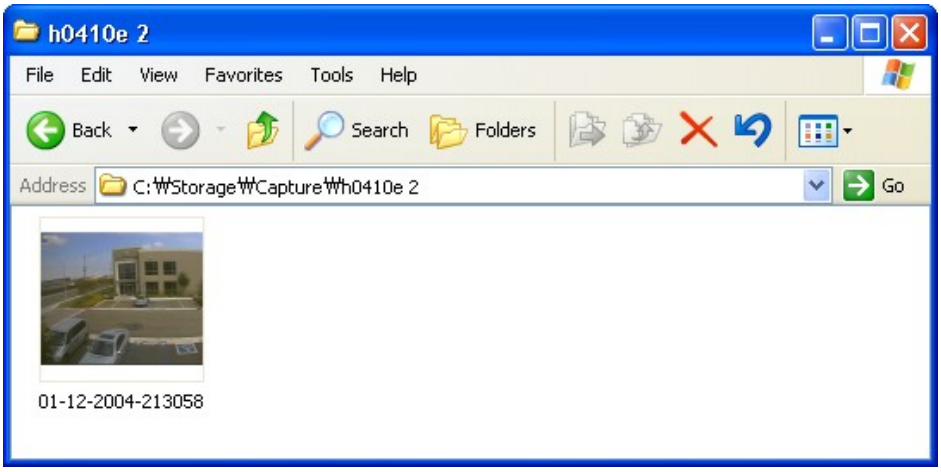


2. Left-click "CAPTURE" button to open the Capture window.



3. Select the Save Path, create a File name, and select a File Format (BMP or JPEG). Left-click "OK" to save the image.

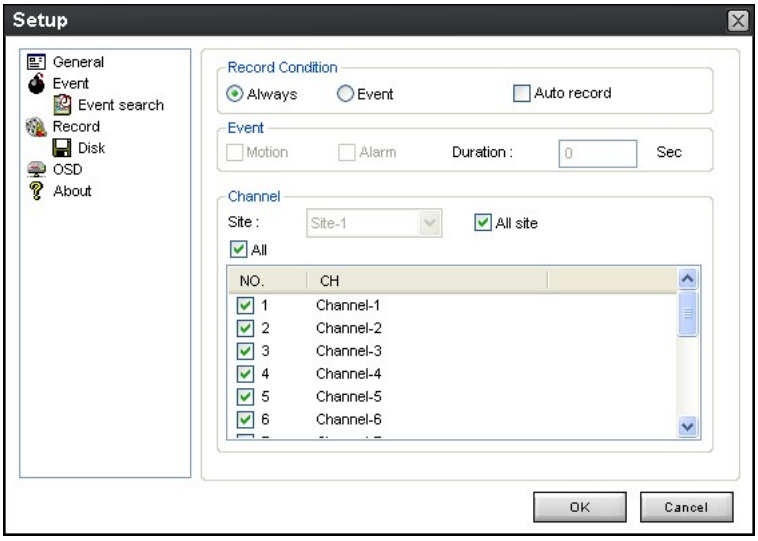
4. The image is saved to the path with the file name created in the capture window.



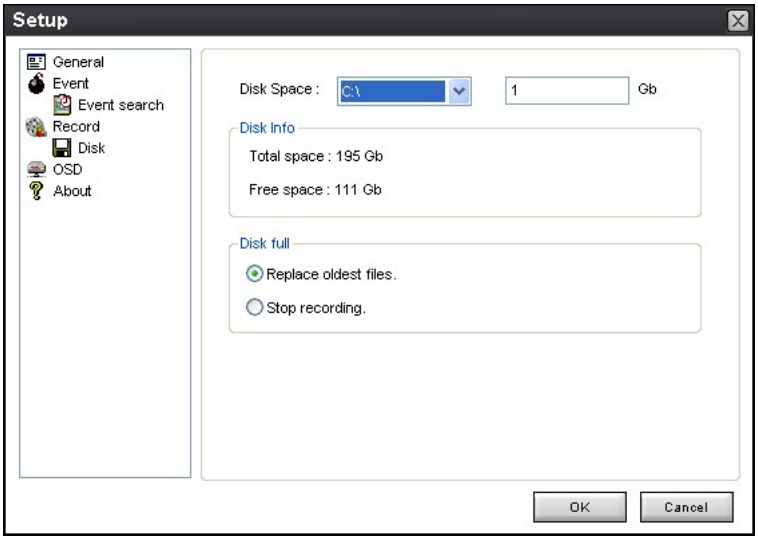
6.8.4 Recording Video on Local PC during Live Mode

1. Click SETUP button. A setup window will be displayed as below.

2. Select Record and set the values.

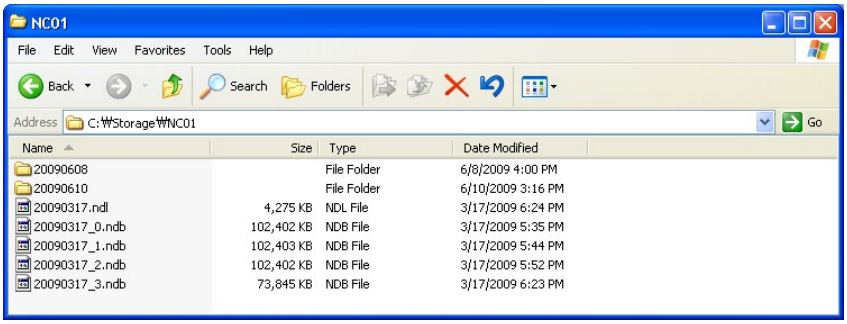


3. Select Disk and set the values.



4. Left-click RECORD ON button. The button color will change.

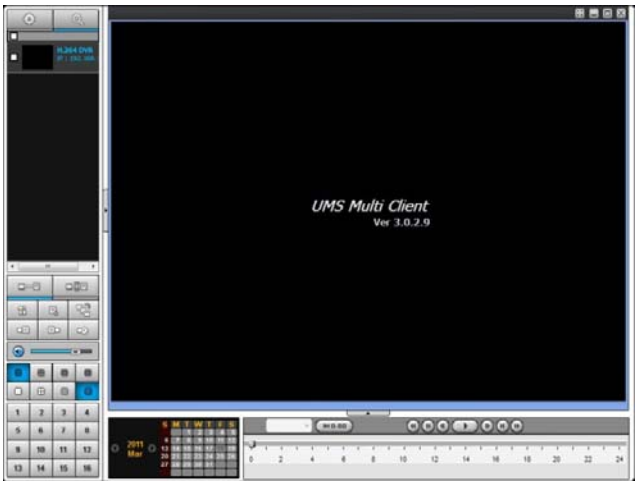
5. Live video data is recorded as set in Record and Disk setup. This video data can be searched and played back with Local Playback.


NC01
File Edit View Favorites Tools Help
Back Search Folders
Address C:₩Storage₩NC01
Go
Name Size Type Date Modified
20090608 File Folder 6/8/2009 4:00 PM
20090610 File Folder 6/10/2009 3:16 PM
20090317.ndl 4,275 KB NDL File 3/17/2009 6:24 PM
20090317_0.ndb 102,402 KB NDB File 3/17/2009 5:35 PM
20090317_1.ndb 102,403 KB NDB File 3/17/2009 5:44 PM
20090317_2.ndb 102,402 KB NDB File 3/17/2009 5:52 PM
20090317_3.ndb 73,845 KB NDB File 3/17/2009 6:23 PM

6.8.5 Local Playback and Remote Playback

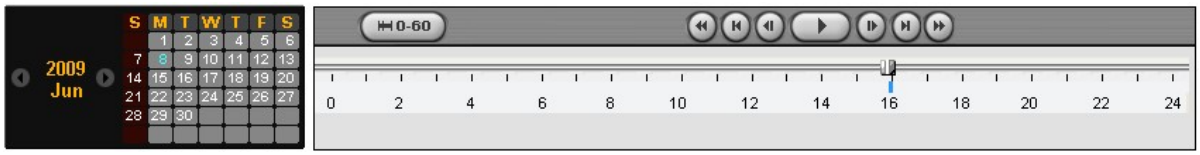
6.8.5.1 Playback of recorded video on local PC

1. Left-click LOCAL PLAYBACK button. The Playback window will be displayed over the Live window.



2. Select site/sites to connect from the directory window.

3. Left-click CONNECT button. The blue bar displays in the Search calendar and the timeline scale window.

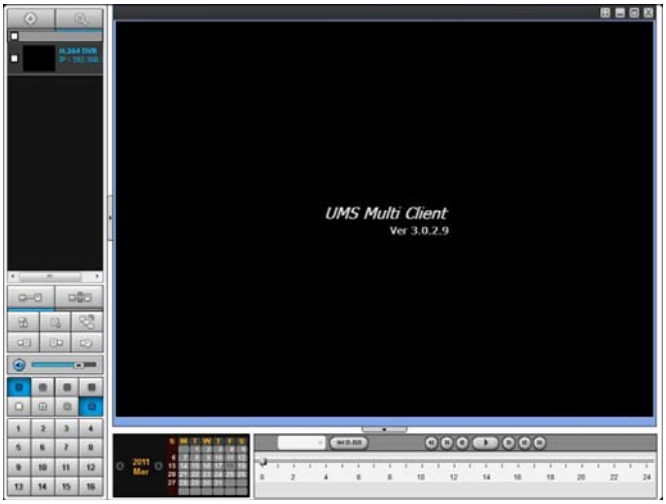


4. Move the marker on the timeline scale to where there is video data and press the PLAY button.

5. Video data that is recorded on the local PC will be played back.

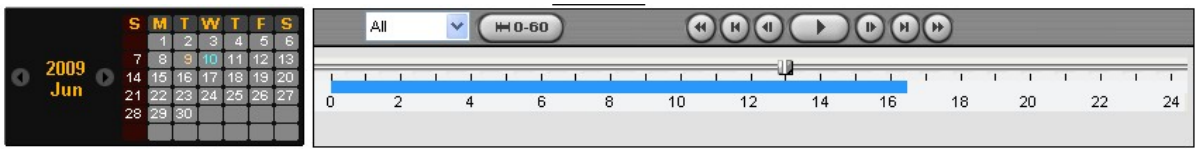
6.8.5.2 Playback of Recorded Video on Remote DVR

1. Left-click REMOTE PLAYBACK button. The Playback window will be displayed over the Live window.

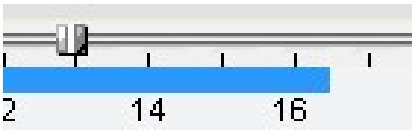


2. Select the site to connect from the directory window.

3. Left-click CONNECT button. In the Search calendar and on the timeline, colors indicate video data.



4. Move the marker on the timeline scale to where there is video data and press the PLAY button.



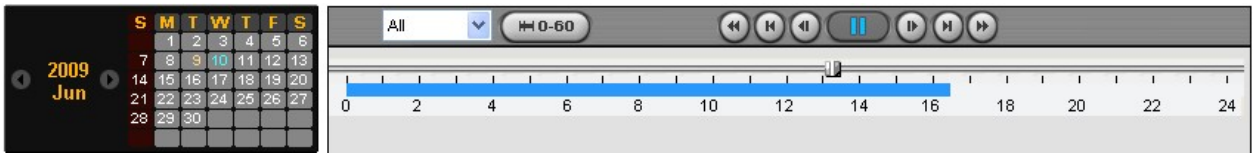
5. Video data that is recorded on the remote DVR is played back.

6.8.6 AVI Backup from Playback

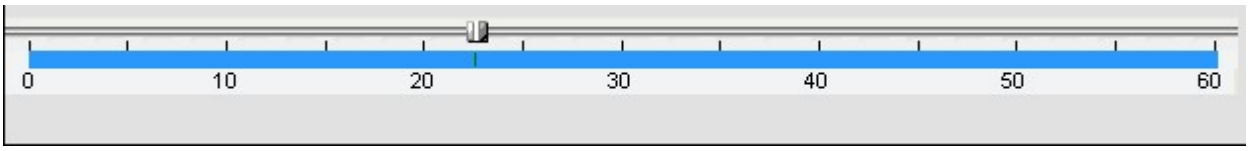
You can back-up the recorded videos in AVI format during playback.

1. Double-click the target channel to backup.

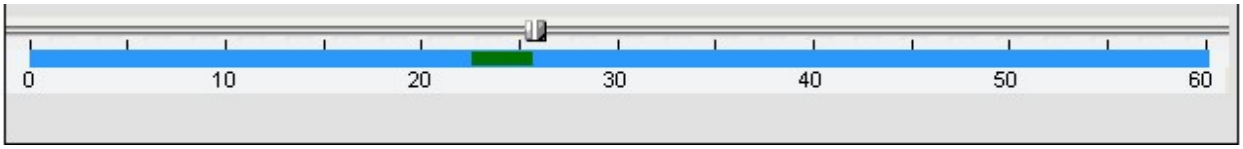
2. Select the start time by using the search calendar and timeline scale bar.



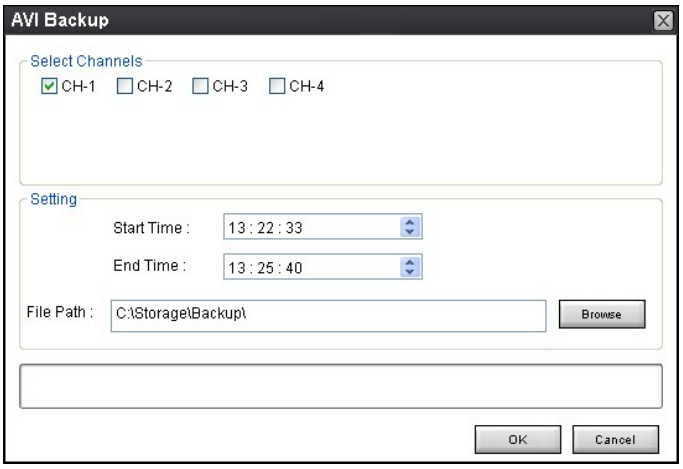
3. Left-click MARK IN button on the timeline scale to select the backup start point.



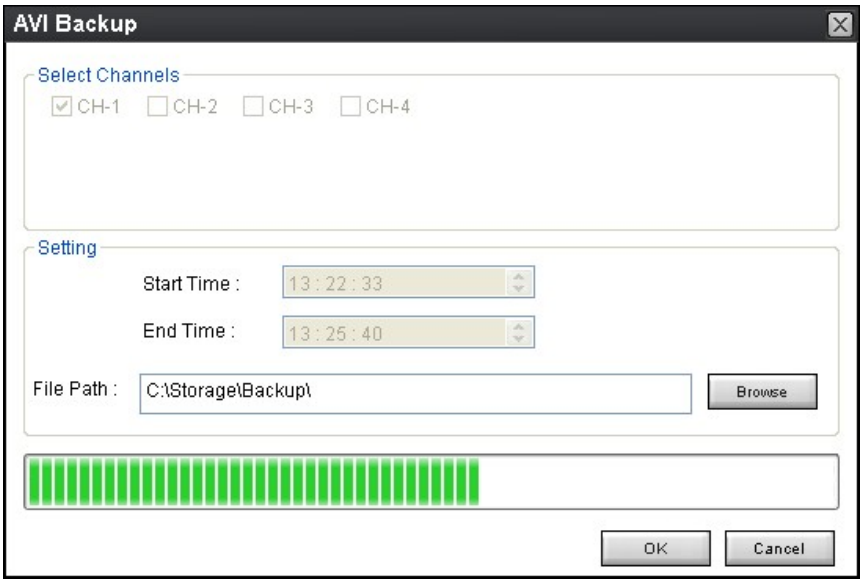
4. Left-click MARK OUT button on the timeline scale to select the backup end point. The period between the selected start and end points will be marked in green on the timeline scale bar.



5. Left-click BACKUP button. The BACKUP window will be displayed as below.



6. The start and end times can be set on this window also. After selecting a channel for backup, left-click “OK” button. The backup will then begin.



7. Video in the AVI format can be played back in Window Media Player™ or other media players compatible with video in the AVI format.

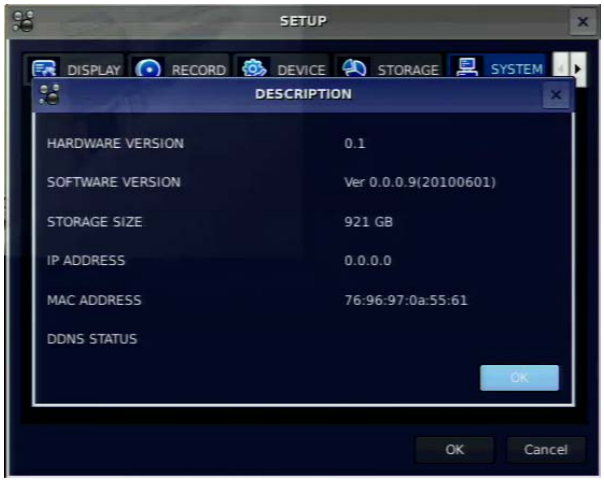
Notice:
When the video is backed up in the NSF format, the user can play it back with the DVR Player, which is downloaded onto the USB flash drive or the DVD-R alongside the backup data.

7. Network – By a Web-Browser Viewer

The DVR provides a live remote monitoring feature by web-browser viewer.

Note: Web-Brower is only available for Internet Explorer

1. Check the IP address of the DVR from SETUP > SYSTEM > DESCRIPTION > IP ADDRESS.



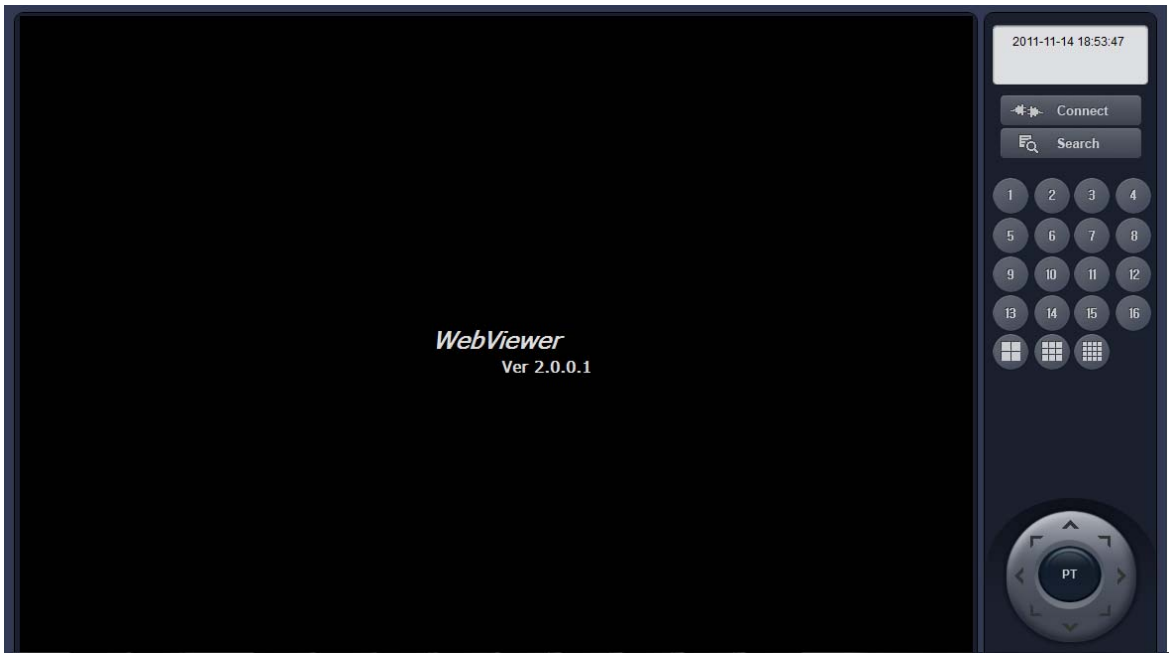
2. Input the IP address or Domain name address that you pre-registered on www.ddnscenter.com .

3. Click the bar shown in the image below. The dialog box will then be displayed.

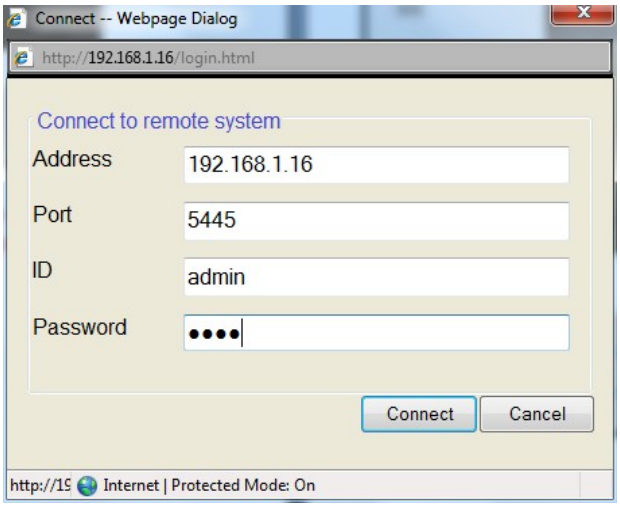
4. Click “Install” to download and install the Active-X control.

Internet Explorer - Security Warning
Do you want to install this software?
Name: WebViewer
Publisher:
More options
Install
Don't Install
While files from the Internet can be useful, this file type can potentially harm your computer. Only install software from publishers you trust. What's the risk?

5. The Web Browser Viewer will be displayed as below after the Active-X installation.

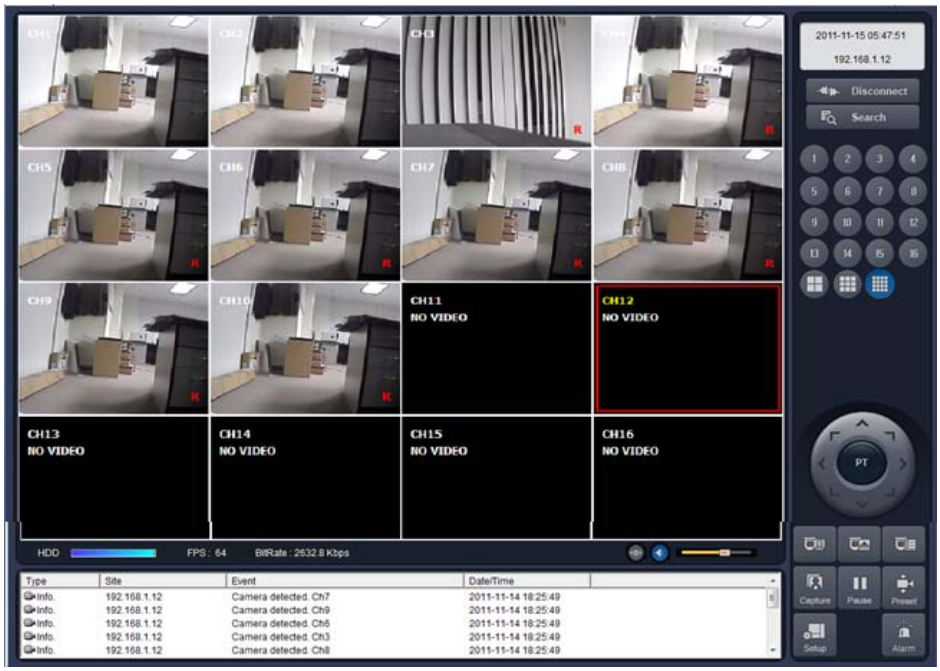


6. Left-click the CONNECT button in the upper-left corner of the web-viewer. The "Connect" dialog box will be displayed. Enter the IP address (or the Domain name address that you pre-registered on www.ddnscenter.com), port number, and password and then left-click "Connect."



- IP Address: Input IP address (Public IP address of a router that DVR is connected) or Domain name that is registered at www.ddnscenter.com.
- Port No.: Input port number of DVR. **Default port number is "2100" for 960(H) DVRs and "2200" for Megapixel DVRs.**
- ID: Input ID of DVR. **Default ID is "admin."**
- Password: Input network password of DVR. **Default Password is "1111."**

7. The cameras connected to the DVR are displayed on the screen.



8. SETUP: The menu settings for the DVR unit can be set from a PC via the network. Refer to section 6.7 Remote Setup of the Multi-Client Software for more information.

8. Network Access Using the Mobile Viewer

8.1 Installing the Viewer

1. Enter the Apple App Store (for Apple iPhone/iPad Users) or the Google Play Store (for Android Phone/Tablet users)

2. Search “iUMS” in the App Store© or the Google Play Store©
3. Install the “iUMS” app. The iUMS icon will be then display on the phone.

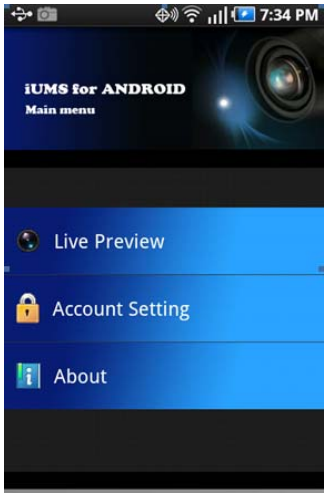
Notice

3G Data Usage applied without Wi-Fi connection. Please check with your phone carrier for more information.

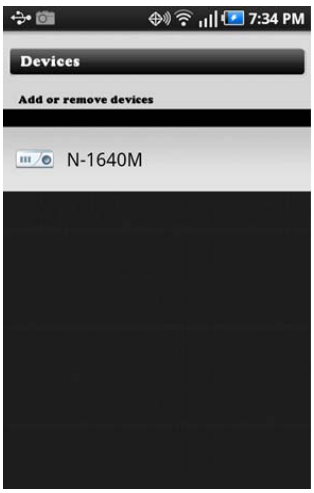
8.2 Mobile Application for Android (Live Monitoring, Search and PTZ Control)

8.2.1 Live

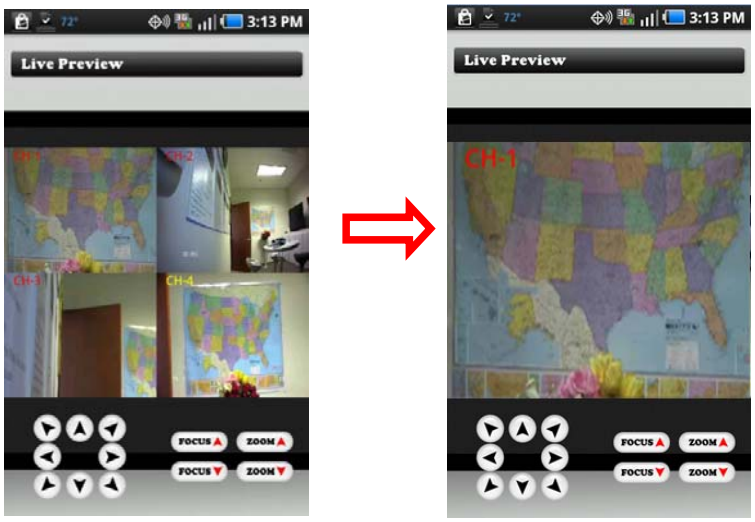
1. Open the installed “iUMS” App and select “Live Preview.” Next click the menu button on the phone to add a remote device.



2. Select the registered device and then select the channels. Up to 4 channels can monitored at a time. Finally, press SELECT button.

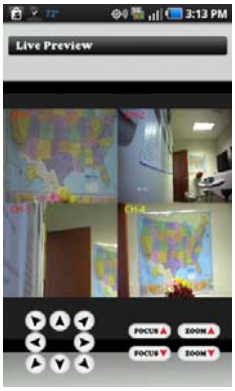


3. The app will display the selected channel(s). Double tap the channel screen to switch between 1 channel display and 4-channel split display.



8.2.2 PTZ Control

To control the PTZ function of the camera, tap the channel screen; the channel name will become Yellow. The PTZ can then be controlled by using the PTZ menu icons on the screen.

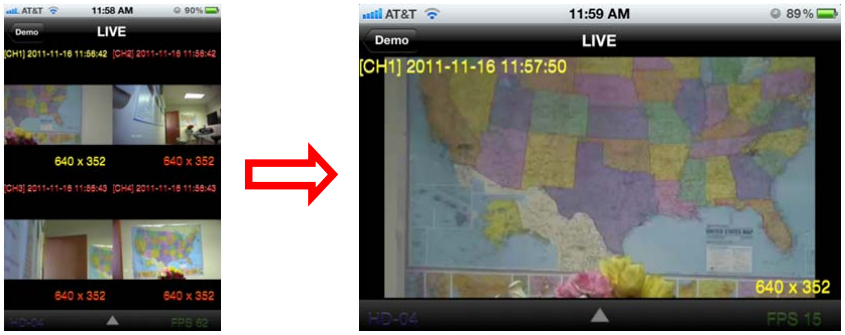


8.3 iUMS for Apple iPhone

8.3.1 Live

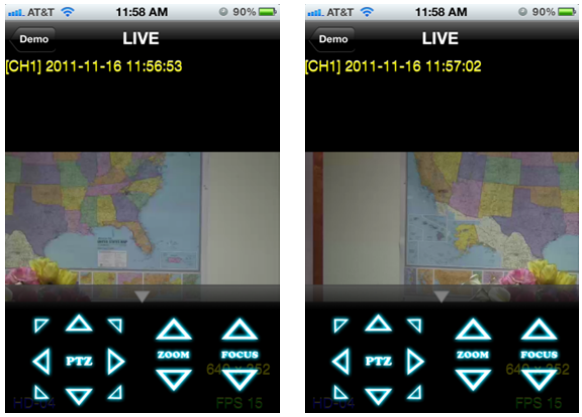
1. Open the installed “iUMS” App and select “Live Preview.” Click the menu button of the phone to add a remote device.
2. Select the registered device and then select the channels. Up to 4 channels can monitored at a time. Set Mode to “Live” Live and then click “Connect”.

3. The app will display the selected channel(s). Double tap the channel screen to switch between 1 channel display and 4-channel split display.



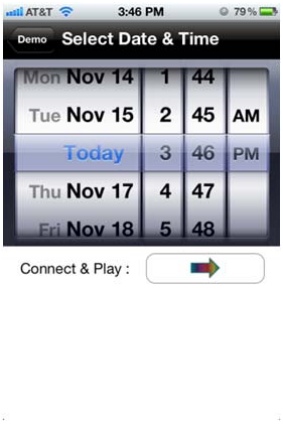
8.3.2 PTZ Control

To control the PTZ function of the camera, tap the menu button; the PTZ menu icons will display. The PTZ can then be controlled by using the PTZ menu icons on the screen.

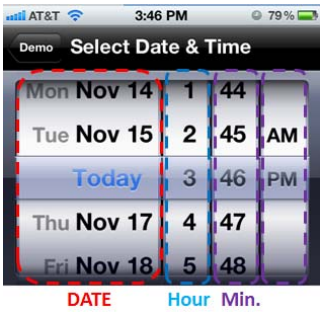


8.3.3 Playback

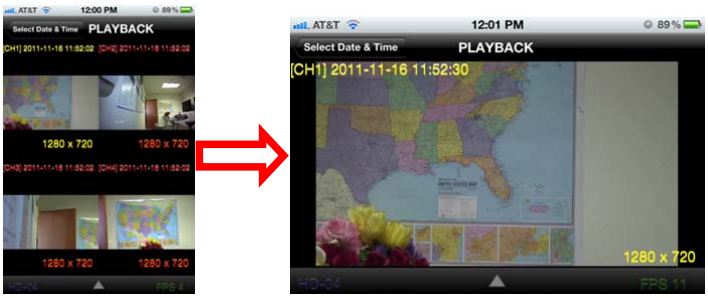
1. Select the registered device and then select the channels. Up to 4 channels can be searched and played back at a time. Select Mode as “Playback” Playback and then click “Connect”. The search window will display.



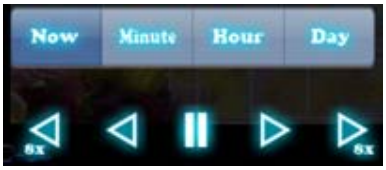
2. Select the date, hour, minute, AM/PM, and then click “Connect & Play”.

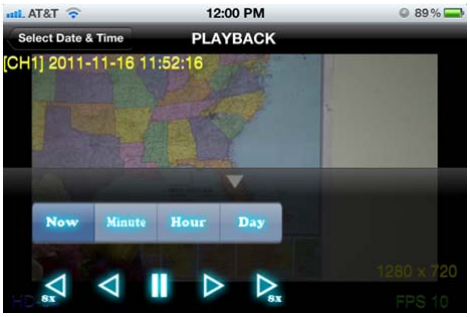


3. The app will display the selected channel(s). Double tap the channel screen to switch between 1 channel display and 4-channel split display.



4. Tap the menu button and the Playback menu icons will display.





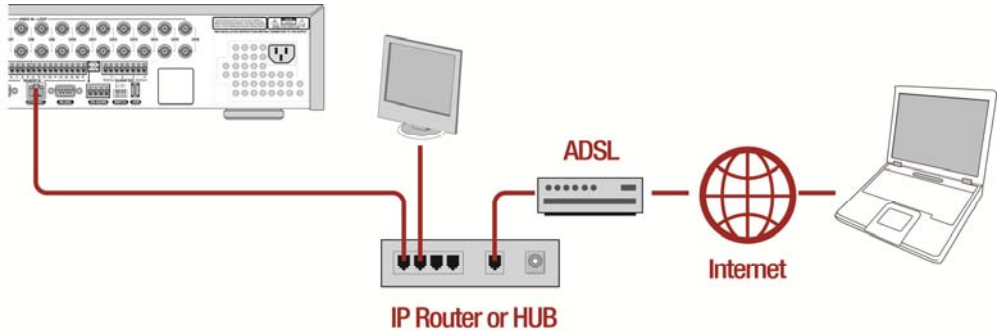
APPENDIX: How to Connect the Network

A. How to set the IP address of the DVR and open TCP port of the router

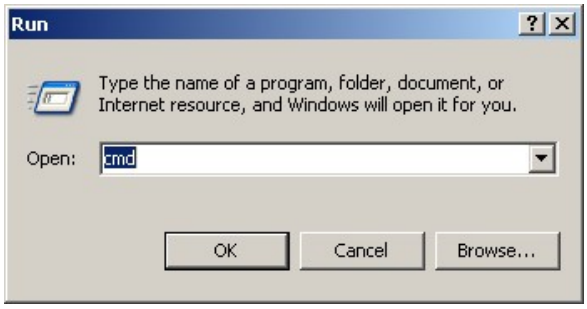
The port forwarding steps will vary depending on the brand and model of the router. Port Forwarding is required to access the DVR remotely.

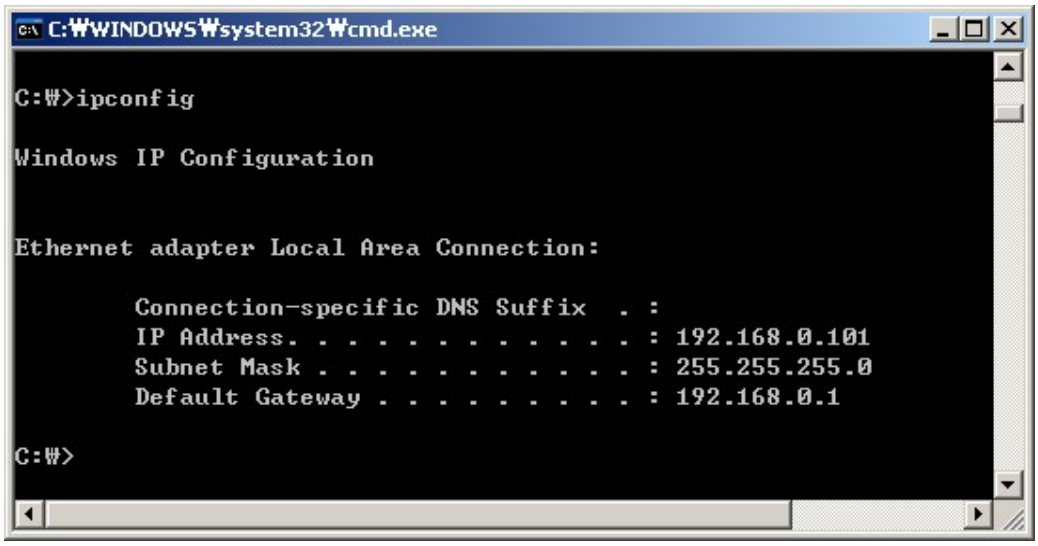
NOTE: Please check router's User's Manual for detailed instructions on Port Forwarding.

Connect network cable between DVR and Router or ADSL modem.

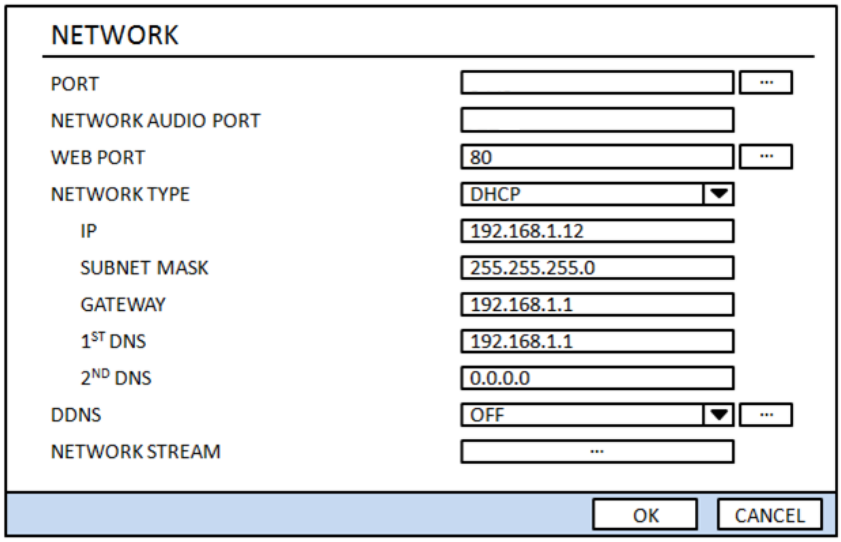


1. Default network setting on DVR are:
   - Port: 2100 (960(H))
   - Port: 2200 (Megapixel)
   - WEB Port: 80
   - Network: DHCP
2. From a PC connected to the same Router as the DVR, select Start > Run > cmd to open the command prompt. In the command prompt, type "ipconfig" to find the following information: IP Address, Subnet Mask, and Default Gateway.




C:₩WINDOWS₩system32₩cmd.exe
C:₩>ipconfig
Windows IP Configuration
Ethernet adapter Local Area Connection:
Connection-specific DNS Suffix . :
IP Address. . . . . : 192.168.0.101
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.0.1
C:₩>

3. Open the default DVR port 2100/2200 and the Default Web Port 80 on the router if the DVR's NETWORK TYPE is set to DHCP. If the DVR's NETWORK TYPE is set the LAN, input the following information in the DVR: IP Address, Subnet Mask, and Default Gateway.



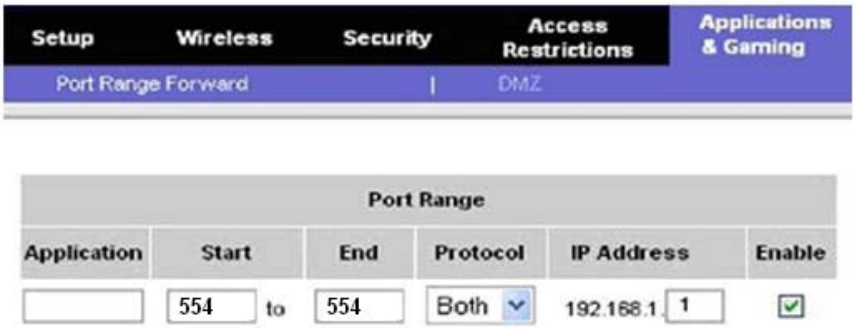
Open your web browser. Enter the router IP address in the address bar and press Enter.

Note: The router's gateway will vary depending on the brand and model of the router. Please refer to routers user's manual.

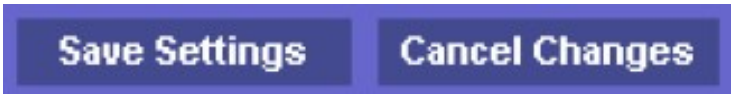
4. Enter user name and password and press the OK button.

   Note: The user name and password will vary depending on the brand and model of the router. Please refer to routers user's manual.

5. Select the Port Range Forwarding tab.



6. Enter the following into their respective fields:
   i. Application: Enter a description of the DVR (Example: store1).
   ii. Start: Enter the first number of the port you need to port forward (Example: 2100 or 2200).
   iii. End: Enter the last number of the port you need to port forward (Example: 2100 or 2200).
   iv. Protocol: Select Both.
   v. IP address: Enter the IP address of the DVR in SETUP > NETWORK > LAN > IP ADDRESS.
   vi. Enable: Check the enable box.
7. Click "Save settings" button located at the bottom of the window. Port forwarding setup is now finished.

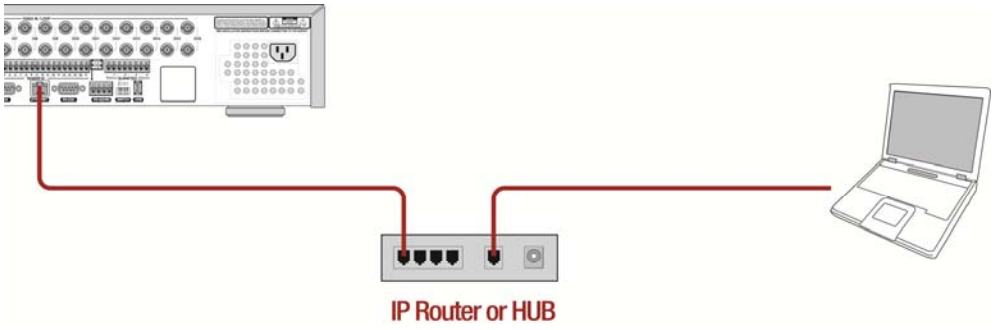


This site shows steps for port forwarding with various router models:
http://www.portforward.com/english/routers/port_forwarding/routerindex.htm

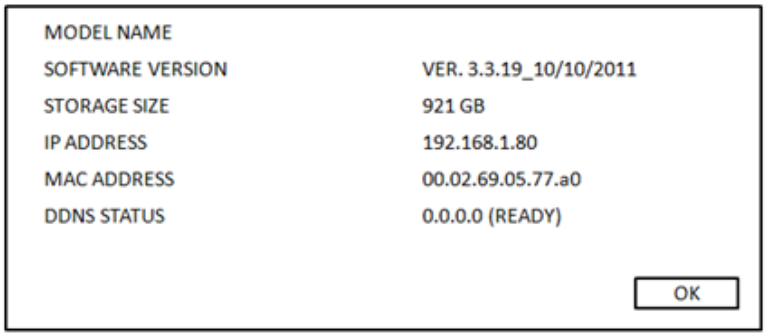
B. How to access DVR from a Remote PC

LAN Connection – Using a Switching Hub

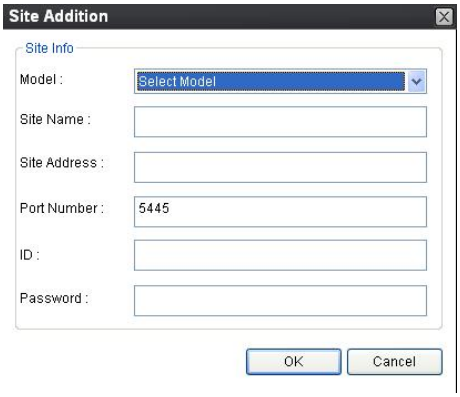
Connect an Ethernet cable (10BASE-T/100BASE-TX CAT5 LAN cable) from the system to a router (or hub).



1. Run the installer for the network client software from the provided CD.
2. Check the IP address on the DVR from SETUP > SYSTEM > DESCRIPTION.



3. Run network client software and click button.



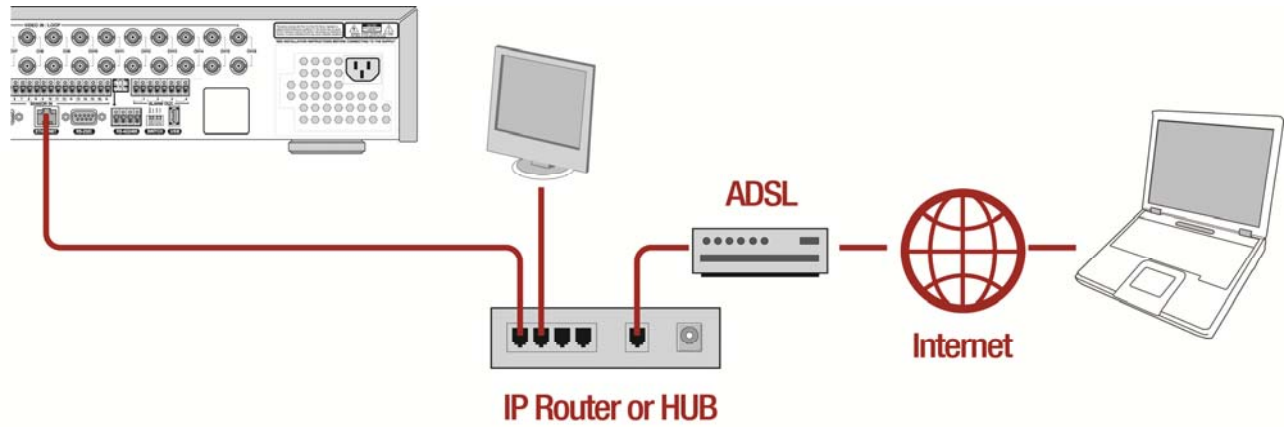
4. Input Site Name, Site Address (IP address), Port Number, and Password on the connect window.
   - Site Name: Input a name that properly describes the site.
   - IP Address: Input IP address (Public IP address for router to which DVR is connected) or Domain name that is registered at www.ddnscenter.com.
   - Port Number: Input port number of DVR. **Default Port Number is "2100" for 960(H) DVRs and "2200" for Megapixel DVRs.**
   - ID: Input ID of DVR. **Default ID is "admin."**

- Password: Input network password of DVR. **Default Password is "1111."**

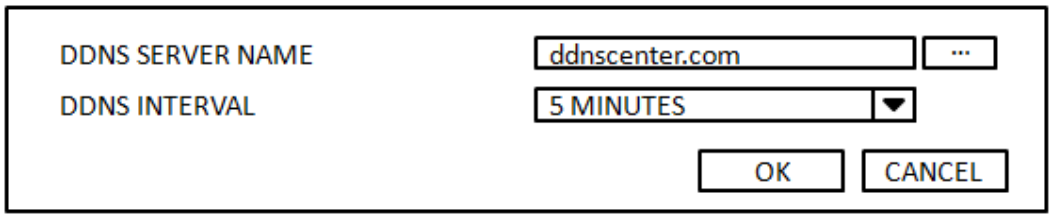
5. Click the OK button and then click the button after checking the box to the left of the site in the left pane.

Internet Connection Using DDNS

Connect an Ethernet cable (10BASE-T/100BASE-TX CAT5 LAN cable) from the system to a router (or hub).



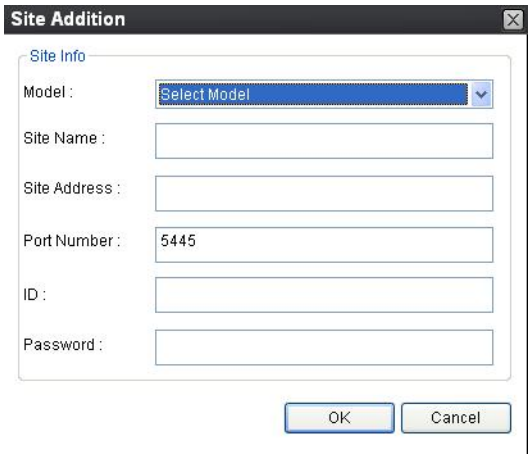
1. Go to SETUP > NETWORK. Set NETWORK TYPE as DHCP or LAN and set the DDNS SERVER to ON. **Select ddnscenter.com on DDNS1. If a different DDNS server is selected, the DVR will not communicate with the DDNS server.**



2. Open the TCP port 2100/2200 and the Web Port 80 in the router. (Refer to APPENDIX A. How to set IP address of the DVR and open TCP port of the router)
3. Confirm the MAC address and Serial Number from the DVR.
   Note: The MAC Address and the Serial Number of the DVR can be found on the DVR unit's label.
4. Open the web browser and log on http://www.ddnscenter.com.

- MAC Address: Input the MAC address of the unit (EX. 0002690XXXXX) without any spaces.
- Serial Number: Input the Serial Number of the unit (EX. N1640Mxxxxxxxxx) without any spaces.
- Domain Name: Input Domain Name for your DVR system.
  Note: Letters A-Z and numbers 0-9 are only applicable. Do not enter symbols or spaces.

5. Click “Duplication Check” button to see if the domain name is available.
6. If you see the screen “You can use the Domain name you entered,” then click RETURN and click REGISTER button to complete the registration.
7. Run the installer for the network client software from the provided CD.
8. Click SITE ADDITION button to add the DVR.



- Site Name: Input a name that properly describes the site.
- IP Address: Input IP address (public IP address of router to which DVR is connected) or Domain name that is registered at www.ddnscenter.com.
- Port No.: Input port number of DVR. **Default Port Number is “2100” for 960(H) DVRs and “2200” for Megapixel DVRs.**
- ID: Input ID of DVR. **Default ID is “admin.”**
- Password: Input network password of DVR. **Default Password is “1111.”**

9. Click the OK button and then click the button after checking the box to the left of the site in the left pane.